



SEQUENCE LISTING

<110> Burgess et al.

<120> Novel Proteins and Nucleic Acids Encoding Same

<130> 21402-099

<140> 09/939,853

<141> 2001-08-27

<150> 60/228,191

<151> 2000-08-25

<150> 60/267,300

<151> 2001-02-08

<150> 60/269,961

<151> 2001-02-20

<150> 60/277,337

<151> 2001-03-20

<160> 159

<170> PatentIn Ver. 2.1

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<212> PRT

<213> Ciona intestinalis

<400> 13

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Arg Gly Pro Thr Glu Asn Arg Val Arg Arg Arg Gln Ser Arg Arg Gln
35 40 45

Ala Ser Val Arg His Asn Arg Asn Ser Ala Ser Asp Glu Glu Asn Asp
50 55 60

Gly Asp Ser Gly Cys Ala Leu Glu Glu Tyr Ala Trp Val Pro Pro Asn
65 70 75 80

Leu Thr Pro Asp Gln Val Arg Tyr Tyr Phe Thr Ser Leu Pro Glu Asp
85 90 95

Lys Val Pro Leu Val Asp Ser Ile Gly Asp Lys Tyr Arg Val Arg Gln
100 105 110

Leu Leu His Gln Leu Pro Pro His Asp Asp Lys Val Cys Tyr Cys Asn
115 120 125

Asp Leu Ser Asp Glu Glu Lys Arg Glu Leu Arg Leu Phe Ser Glu Gln
130 135 140

Arg Lys Lys Asp Tyr Leu Gly Cys Gly Lys Ile Arg Ile Leu Pro Leu
145 150 155 160

Asn Thr Pro Gly Thr Pro Cys Ser Glu Cys Gly Ile Leu Val Lys Gly
165 170 175

Gly Asp Ile Val Ala Val Ala Ser Arg Ala Glu Pro Gly Met Cys Trp
180 185 190

His Pro Ala Cys Phe Val Cys Ser Val Cys Arg Glu Leu Leu Val Asp
195 200 205

Leu Phe Tyr Phe Tyr Gln Asp Gly Arg Leu Tyr Cys Gly Arg His His
210 215 220

Ala Glu Thr Leu Lys Pro Arg Cys Ser Ala Cys Asp Glu Ile Ile Phe
225 230 235 240

Ser Asp Glu Cys Thr Glu Ala Glu Gly Arg His Trp His Met Asp His
245 250 255

Phe Cys Cys Phe Glu Cys Asp Gln Val Leu Gly Gly Gln Arg Tyr Ile
260 265 270

Met Arg Asp Gly Lys Pro Asn Cys Thr Gln Cys Phe Glu Ala Leu Tyr
275 280 285

Ala	Glu	Tyr	Cys	Asp	Met	Cys	Gly	Asp	Leu	Ile	Gly	Leu	Asp	Ala	Gly		
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Gln	Met	Gln	Tyr	Glu	Gly	Gln	His	Trp	His	Ala	Thr	Asp	Asn	Cys	Phe		
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Cys	Cys	Asn	Arg	Cys	Arg	Lys	Ser	Leu	Leu	Gly	Arg	Pro	Phe	Leu	Pro		
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Lys	His	Gly	Arg	Ile	Phe	Cys	Ser	Lys	Ala	Cys	Ser	Leu	Gly	Glu	Asp		
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Pro	Gly	His	Ser	Glu	Ser	Asp	Ser	Gln	His	Ser	Ser	Ser	Gln	Tyr	Glu		
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Arg	Pro	Ser	His	Pro	Tyr	Leu	Asp	Gly	Met	Asp	Pro	Val	Asn	Ala	Glu		
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Met	Val	Thr	Glu	Asn	Asp	Ala	Gly	Phe	Lys	Gly	Ala	Ala	Thr	Ser	Arg		
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Arg	Thr	Thr	Ser	Lys	Asn	Gly	Val	Gln	Phe	Pro	Gln	Asn	Thr	Tyr	Asn		
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Ser	Thr	Asp	Ser	Ser	Gly	Tyr	Asn	Ser	Ser	Ser	Thr	Leu	Asp	Ala	Ile		
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Glu	His	Gln	Gln	Asn	Ala	Ala	Leu	Lys	Ala	Ala	Met	Gly	Ser	Asn	Tyr		
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Ser	Tyr	Gly	Lys	Ser	Lys	Gln	Thr	Pro	Cys	Ser	Lys	Arg	Pro	Gln	Asn		
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Gly	Glu	Asp	Gly	His	Val	Ser	Ala	Thr	Glu	Phe	Thr	Pro	Phe	His	Pro		
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Ala	Ala	Pro	Arg	Ala	Ser	Pro	Pro	Thr	Ile	Ile	Gly	Ser	Arg	Lys	Leu		
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Ala	Pro	Glu	Ile	Lys	Lys	Thr	Ile	Asp	Ser	Leu	Thr	Lys	Ala	Thr	Glu		
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Ile	Asp	Asn	Lys	Ser	Pro	Pro	Val	Asn	Val	Ala	Ser	Met	Leu	Pro	Lys	595	600	605	
Ser	Ala	Val	Pro	Ile	Pro	Ala	Pro	Arg	Ala	Arg	Tyr	Ala	Pro	Ser	Leu	610	615	620	
Thr	Pro	Ser	Pro	Pro	Ser	Thr	Ala	Ala	Ser	Glu	Leu	Thr	Ser	Pro	Trp	625	630	635	640
Met	His	Lys	Ser	His	Ala	Arg	Thr	Asp	Ser	Pro	Pro	Asp	Ser	Arg	Glu	645	650	655	
Phe	Pro	Ser	Pro	Pro	Val	Pro	Val	Arg	Ser	Pro	Pro	Thr	Glu	Ser	Lys	660	665	670	
Glu	His	Ser	Ser	Pro	Leu	Gln	Arg	Ser	Val	Ser	Glu	Arg	Leu	Ala	Asn	675	680	685	
Lys	Arg	Arg	Ser	Arg	Glu	Pro	Ile	Ser	Leu	Pro	Glu	Gln	Thr	Ile	Ser	690	695	700	
Glu	His	Pro	Arg	Leu	Arg	Ser	Asp	Asp	Lys	His	Val	Ser	Val	Glu	Asn	705	710	715	720
Asp	Lys	Thr	Ser	Pro	Glu	Leu	Lys	Ser	Ile	Leu	Lys	Lys	Ser	Arg	Asn	725	730	735	
Pro	Ser	Lys	Ser	Phe	Arg	Asn	Arg	Glu	Arg	Gly	Ser	Leu	Ser	Gly	Ser	740	745	750	
Leu	Asp	Arg	Leu	Glu	Glu	Phe	His	Arg	Lys	Ser	Asp	Val	Met	Lys	Tyr	755	760	765	
Ala	Ser	Asp	Asp	Glu	Asp	Gly	Ala	Gly	Phe	Gly	Asp	Ala	Gln	Gly	Asp	770	775	780	
Phe	Ser	Ser	Phe	Gln	Arg	Gly	Gln	Arg	Leu	Tyr	Ser	Ser	Ala	Arg	Phe	785	790	795	800
Pro	Glu	Glu	Val	Thr	Glu	Lys	Pro	Arg	Ser	Gln	Asn	Gln	Gly	Gly	Arg	805	810	815	
Pro	Arg	Ser	Gln	His	Arg	Thr	Arg	Phe	Lys	Asp	Asn	Ser	Ala	Leu	Asp	820	825	830	
Arg	Thr	His	Ser	Ala	Leu	Asn	Leu	Asp	Glu	Leu	Asp	Cys	Ala	Ile	Ala	835	840	845	
Arg	Arg	Asn	Pro	Lys	Pro	Gly	Lys	Thr	Cys	Ser	Lys	Leu	Ser	Gly	Lys	850	855	860	
Ser	Thr	Cys	Ser	Lys	Lys	Leu	Lys	Arg	Thr	Arg	Ser	Thr	Asp	Phe	Ala	865	870	875	880
Phe	Glu	Arg	Ser	Ala	Ala	Thr	Pro	Thr	Ser	Ser	Arg	Lys	Asn	Arg	Arg	885	890	895	

Thr Lys Arg Phe Val Glu Asp Glu Glu Glu Asp Gly Trp Cys Ser Thr
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Cys Thr Ser Ser Asn Asp Asp Ser Asp Tyr Glu Arg Trp Asp Gly Leu
 915 920 925

Gly Thr Ser Pro Pro Thr Ser Pro Leu Ser Ala Met Arg Arg Gly Ser
 930 935 940

Ala Pro Val Gly Val Arg Val Asn Met Thr Arg Arg Gln Pro Pro His
 945 950 955 960

Pro Phe Leu Ala Asn Ala Asp Ser Ala Leu Ala Ala Ser Ala Ala Gly
 965 970 975

Phe Asn Ser Asn Gly Val Tyr Arg Pro Ser Met Pro Arg Asn Phe Ser
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Ile Val Met
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<213> Ciona intestinalis

<400> 14

Met Thr Met Pro Ala Ala Ala Thr Glu Gln Thr Arg Gly Thr Met Pro
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Ser Asn Ile Asp Pro Lys Ser Ala Gly Leu Asp Gln Asp Ile Val Ile
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Arg Gly Pro Thr Glu Asn Arg Val Arg Arg Arg Gln Ser Arg Arg Gln
 35 40 45

Ala Ser Val Arg His Asn Arg Asn Ser Ala Ser Asp Glu Glu Asn Asp
 50 55 60

Gly Asp Ser Gly Cys Ala Leu Glu Glu Tyr Ala Trp Val Pro Pro Asn
 65 70 75 80

Leu Thr Pro Asp Gln Val Arg Tyr Tyr Phe Thr Ser Leu Pro Glu Asp
 85 90 95

Lys Val Pro Leu Val Asp Ser Ile Gly Asp Lys Tyr Arg Val Arg Gln
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Leu Leu His Gln Leu Pro Pro His Asp Asp Lys Val Cys Tyr Cys Asn
 115 120 125

Asp Leu Ser Asp Glu Glu Lys Arg Glu Leu Arg Leu Phe Ser Glu Gln

130	135	140
Arg Lys Lys Asp Tyr Leu Gly Cys Gly Lys Ile Arg Ile Leu Pro Leu 145 150 155 160		
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His Pro Ala Cys Phe Val Cys Ser Val Cys Arg Glu Leu Leu Val Asp 195 200 205		
Leu Phe Tyr Phe Tyr Gln Asp Gly Arg Leu Tyr Cys Gly Arg His His 210 215 220		
Ala Glu Thr Leu Lys Pro Arg Cys Ser Ala Cys Asp Glu Ile Ile Phe 225 230 235 240		
Ser Asp Glu Cys Thr Glu Ala Glu Gly Arg His Trp His Met Asp His 245 250 255		
Phe Cys Cys Phe Glu Cys Asp Gln Val Leu Gly Gly Gln Arg Tyr Ile 260 265 270		
Met Arg Asp Gly Lys Pro Asn Cys Thr Gln Cys Phe Glu Ala Leu Tyr 275 280 285		
Ala Glu Tyr Cys Asp Met Cys Gly Asp Leu Ile Gly Leu Asp Ala Gly 290 295 300		
Gln Met Gln Tyr Glu Gly Gln His Trp His Ala Thr Asp Asn Cys Phe 305 310 315 320		
Cys Cys Asn Arg Cys Arg Lys Ser Leu Leu Gly Arg Pro Phe Leu Pro 325 330 335		
Lys His Gly Arg Ile Arg Cys Ser Lys Ala Cys Ser Leu Gly Glu Asp 340 345 350		
Pro Gly His Ser Glu Ser Asp Ser Gln His Ser Ser Ser Gln Tyr Glu 355 360 365		
Asn Pro Gln Leu Pro Thr Ser His Asn Val Arg Arg Ser Leu Asn Leu 370 375 380		
Asp Asn Leu Ser Ile His Asp Lys Pro Trp Glu Asp Lys Gly Glu Leu 385 390 395 400		
Ser Pro Ala Ser Asn Asn Val Phe Ile Asp Ala Ala Asp Met Tyr Pro 405 410 415		
Thr Ser Ala Ala Val Ala Ala Ser Thr Arg Tyr Ser Lys Gly His Thr 420 425 430		
Arg Pro Ser His Pro Tyr Leu Asp Gly Met Asp Pro Val Asn Ala Glu		

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Met	His	Lys	Ser	His	Ala	Arg	Thr	Asp	Ser	Pro	Pro	Asp	Ser	Arg	Glu
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Phe	Pro	Ser	Pro	Pro	Val	Pro	Val	Pro	Ser	Pro	Pro	Thr	Glu	Ser	Lys
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Pro	Ser	Lys	Ser	Phe	Arg	Asn	Arg	Glu	Arg	Gly	Ser	Leu	Ser	Gly	Ser

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785					790					795					800
Pro	Glu	Glu	Val	Thr	Glu	Lys	Pro	Arg	Ser	Gln	Asn	Gln	Gly	Gly	Arg
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Pro	Arg	Ser	Gln	His	Arg	Thr	Arg	Phe	Lys	Asp	Asn	Ser	Ala	Leu	Arg
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Pro	Asn	Ala	Gln	Arg	Ser	Gln	Phe	Arg	Glu	Gln	Lys	Leu	Glu	Leu	Asp
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Cys	Ala	Ile	Ala	Arg	Arg	Asn	Pro	Lys	Pro	Gly	Lys	Thr	Cys	Ser	Lys
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Leu	Ser	Gly	Lys	Ser	Thr	Cys	Ser	Lys	Lys	Leu	Lys	Arg	Thr	Arg	Ser
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Thr	Asp	Phe	Ala	Phe	Glu	Arg	Ser	Ala	Ala	Thr	Pro	Thr	Ser	Ser	Arg
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Lys	Asn	Arg	Arg	Thr	Lys	Arg	Phe	Val	Glu	Asp	Glu	Glu	Glu	Asp	Gly
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Trp	Cys	Ser	Thr	Cys	Thr	Ser	Ser	Ser	Asp	Asp	Ser	Asp	Tyr	Glu	Arg
	915					920						925			
Trp	Asp	Gly	Leu	Gly	Thr	Ser	Pro	Pro	Thr	Ser	Pro	Leu	Ser	Ala	Met
	930					935					940				
Arg	Arg	Gly	Ser	Ala	Pro	Val	Gly	Val	Arg	Val	Asn	Met	Thr	Arg	Arg
945					950					955					960
Gln	Pro	Pro	His	Pro	Phe	Leu	Ala	Asn	Ala	Asp	Ser	Ala	Leu	Ala	Ala
				965				970						975	
Ser	Ala	Ala	Gly	Phe	Asn	Ser	Asn	Gly	Val	Tyr	Arg	Pro	Ser	Met	Pro
			980					985					990		
Arg	Asn	Phe	Phe	Phe	His	His	Val	Ala	Tyr	Ala	Leu	Gln	Ala	Glu	Thr
	995						1000					1005			
Ala	Glu	Lys	Ala	Leu	Tyr	Arg	His	Val	Thr	Thr	Asn	Ala	Val	Thr	Lys
	1010					1015					1020				
Thr	Ser	Glu	Ile	Asp	Arg	Lys	Ser	Ser	Glu	Thr	Lys	Ser	Trp	Arg	Ser
1025					1030					1035				1040	
Gln	Asp	Ala	Ser	Tyr	Leu	Pro	Arg	Gly	Gly	Ser	Lys	Ala	Arg	Glu	Ser

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Ala Pro Ile Val Asp Thr Asn Thr Ser Ala		
1060	1065	
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Ser Tyr Tyr Thr Gln Thr Glu Ser Glu Leu Leu Gln Ile Glu Ala Gly		
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Gly Thr Gly Leu Thr Phe Ala Ser His Ser Gln Arg Pro Glu Ser Ala		
35	40	45
Ile Ser Gln Val Ala Ser Thr Ala His Leu Asp Val Pro Ser Ala Ala		
50	55	60
Ser Ser Gly Ser Gly Gly Ser Ala Val Ser Gly Gly Ser Gly Gly Ala		
65	70	75
Pro Glu Ser Ala Gly Arg Phe Val Ser Pro Leu Gln Arg Arg His Cys		
85	90	95
Gln Pro Pro Ser His Leu Pro Leu Asn Ser Val Ala Ser Pro Leu Arg		
100	105	110
Thr Ala Ser Tyr Lys Ser Ala Ala Ala Val Ala Gly His Gly Phe His		
115	120	125
His Ser His His Gln Gln Leu Asp Phe Gln Arg Asn Ser Gln Ser Asp		
130	135	140
Asp Asp Ser Gly Cys Ala Leu Glu Glu Tyr Thr Trp Val Pro Pro Gly		
145	150	155
Leu Arg Pro Asp Gln Val Arg Leu Tyr Phe Ser Gln Leu Pro Asp Asp		
165	170	175
Lys Val Pro Tyr Val Asn Ser Pro Gly Glu Lys Tyr Arg Val Lys Gln		
180	185	190
Leu Leu His Gln Leu Pro Pro Gln Asp Asn Glu Val Arg Tyr Cys His		
195	200	205
Ser Leu Ser Asp Glu Glu Arg Lys Glu Leu Arg Ile Phe Ser Ala Gln		
210	215	220
Arg Lys Arg Glu Ala Leu Gly Arg Gly Ala Val Arg Leu Leu Ser Asp		
225	230	235
		240

Glu	Arg	Pro	Cys	Lys	Gly	Cys	Glu	Glu	Pro	Leu	Ser	Gly	Gly	Asp	Ile	
				245					250					255		
Val	Val	Phe	Ala	Gln	Arg	Leu	Gly	Ala	Gln	Leu	Cys	Trp	His	Pro	Gly	
			260					265					270			
Cys	Phe	Val	Cys	Ser	Val	Cys	Lys	Glu	Leu	Leu	Val	Asp	Leu	Ile	Tyr	
		275					280					285				
Phe	Gln	Arg	Asp	Gly	Asn	Leu	Tyr	Cys	Gly	Arg	His	His	Ala	Glu	Thr	
	290					295					300					
Gln	Lys	Pro	Arg	Cys	Ser	Ala	Cys	Asp	Glu	Ile	Ile	Phe	Ser	Asp	Glu	
305					310					315					320	
Cys	Thr	Glu	Ala	Glu	Gly	Arg	Thr	Trp	His	Met	Lys	His	Phe	Ala	Cys	
				325					330					335		
Gln	Glu	Cys	Glu	His	Gln	Leu	Gly	Gly	Gln	Arg	Tyr	Ile	Met	Arg	Glu	
			340					345					350			
Gly	Lys	Pro	Tyr	Cys	Leu	Ala	Cys	Phe	Asp	Thr	Met	Phe	Ala	Glu	Tyr	
		355					360					365				
Cys	Asp	Tyr	Cys	Gly	Glu	Val	Ile	Gly	Val	Asp	Gln	Gly	Gln	Met	Ser	
	370					375					380					
His	Asp	Gly	Gln	His	Trp	His	Ala	Thr	Asp	Gln	Cys	Phe	Ser	Cys	Cys	
385					390					395					400	
Thr	Cys	Arg	Cys	Ser	Leu	Leu	Gly	Arg	Pro	Phe	Leu	Pro	Arg	Arg	Gly	
				405					410					415		
Thr	Ile	Tyr	Cys	Ser	Ile	Ala	Cys	Ser	Lys	Gly	Glu	Pro	Pro	Thr	Pro	
			420					425					430			
Ser	Asp	Thr	Ser	Ser	Gly	Pro	Gln	Leu	Arg	Pro	Thr	His	Arg	Ala	Ser	
		435					440					445				
Thr	Ser	Ser	Gln	Ile	Ala	Lys	Ser	Pro	Arg	Arg	Gly	Gly	Glu	Arg	Glu	
	450					455					460					
Arg	Asp	Pro	Gly	Arg	Lys	Ala	His	His	Gly	His	Pro	Lys	Ala	Thr	Gly	
465					470				475						480	
Ser	Ala	Gly	Asp	Leu	Leu	Glu	Arg	Gln	Glu	Arg	Gln	Arg	Met	Glu	Ala	
				485					490				495			
Ala	Gly	Val	Ala	Asp	Leu	Leu	Leu	Gly	Gly	Gly	Val	Pro	Gly	Met	Pro	
			500					505					510			
Arg	Pro	Ala	His	Pro	Pro	Pro	Ile	Asp	Leu	Thr	Glu	Leu	Gly	Ile	Ser	
		515					520					525				
Leu	Asp	Asn	Ile	Cys	Ala	Gly	Asp	Lys	Ser	Ile	Phe	Gly	Asp	Thr	Gln	
	530					535					540					

Thr Leu Thr Asn Ser Met Pro Asp Met Leu Leu Ser Lys Ala Asp Asp
 545 550 555 560
 Ser His Ser Tyr Gln Ser Ile Asp Lys Ile Asn Leu Asn Ser Pro Ser
 565 570 575
 Asn Ser Asp Leu Thr Gln Ser Thr Gln Glu Leu Ala Asn Glu Leu Glu
 580 585 590
 Leu Asp Asn Glu Pro Val Arg Glu Leu Pro His Asp Gly Tyr Glu Gln
 595 600 605
 Leu Phe Ala Asn Asn Arg Asn Gln Glu His Pro Ala Glu Gln Tyr Asp
 610 615 620
 Asp Glu Gln Leu Asp Asn Arg Pro Met Lys Glu Val Arg Phe His Ser
 625 630 635 640
 Val Gln Asp Thr Met Ser Arg Ser Lys Ser Tyr Thr Asp Asn Ser Asn
 645 650 655
 Ala Arg Arg Arg Arg Arg Arg Arg Asn Gln Ser Arg Ser Ser Ser Glu
 660 665 670
 Met Gln Ile Asn Gln Thr Asn Leu Arg Leu His Asn Ala Gln Thr Gln
 675 680 685
 Val Gly Thr Thr Pro Leu Asn Leu Leu Asn Asn Leu Asp Asn Cys Asp
 690 695 700
 Val Ala Ser Ile Cys Ser Thr Cys Ser Ser Ser Ser Ser Asp Met
 705 710 715 720
 Asp Asp Tyr Val Tyr Arg Leu Pro Ala Arg Lys His Tyr Gly Gly Val
 725 730 735
 Arg Val Ala Tyr Val Pro Asn Asp Ala Leu Ala Tyr Glu Arg Lys Lys
 740 745 750
 Lys Met Ala Gln Asp Ser Ser Leu Ala Pro Gly Ala Gly Asn Ala Ser
 755 760 765
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 770 775 780
 Ser
 785

<210> 16
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 <213> Homo sapiens

<400> 16
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Glu Ala Glu Asp Pro Asp Arg Gly Gln Pro Cys Asn Ser Cys Arg Glu
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Gln Cys Pro Gly Phe Leu Leu His Gly Trp Arg Lys Ile Cys Gln His
 35 40 45

Cys Lys Cys Pro Arg Glu Glu His Ala Val His Ala Val Pro Val Asp
 50 55 60

Leu Glu Arg Ile Met Cys Arg Leu Ile Ser Asp Phe Gln Arg His Ser
 65 70 75 80

Ile Ser Asp Asp Asp Ser Gly Cys Ala Ser Glu Glu Tyr Ala Trp Val
 85 90 95

Pro Pro Gly Leu Lys Pro Glu Gln Val Tyr Gln Phe Phe Ser Cys Leu
 100 105 110

Pro Glu Asp Lys Val Pro Tyr Val Asn Ser Pro Gly Glu Lys Tyr Arg
 115 120 125

Ile Lys Gln Leu Leu His Gln Leu Pro Pro His Asp Ser Glu Ala Gln
 130 135 140

Tyr Cys Thr Ala Leu Glu Glu Glu Glu Lys Lys Glu Leu Arg Ala Phe
 145 150 155 160

Ser Gln Gln Arg Lys Arg Glu Asn Leu Gly Arg Gly Ile Val Arg Ile
 165 170 175

Phe Pro Val Thr Ile Thr Gly Ala Ile Cys Glu Glu Cys Gly Lys Gln
 180 185 190

Ile Gly Gly Gly Asp Ile Ala Val Phe Ala Ser Arg Ala Gly Leu Gly
 195 200 205

Ala Cys Trp His Pro Gln Cys Phe Val Cys Thr Thr Cys Gln Glu Leu
 210 215 220

Leu Val Asp Leu Ile Tyr Phe Tyr His Val Gly Lys Val Tyr Cys Gly
 225 230 235 240

Arg His His Ala Glu Cys Leu Arg Pro Arg Cys Gln Ala Cys Asp Glu
 245 250 255

Ile Ile Phe Ser Pro Glu Cys Thr Glu Ala Glu Gly Arg His Trp His
 260 265 270

Met Asp His Phe Cys Cys Phe Glu Cys Glu Ala Ser Leu Gly Gly Gln
 275 280 285

Arg Tyr Val Met Arg Gln Ser Arg Pro His Cys Cys Ala Cys Tyr Glu
 290 295 300

Ala Arg His Ala Glu Tyr Cys Asp Gly Cys Gly Glu His Ile Gly Leu
 305 310 315 320

Asp Gln Gly Gln Met Ala Tyr Glu Gly Gln His Trp His Ala Ser Asp
 325 330 335

Arg Cys Phe Cys Cys Ser Arg Cys Gly Arg Ala Leu Leu Gly Arg Pro
 340 345 350

Phe Leu Pro Arg Arg Gly Leu Ile Phe Cys Ser Arg Ala Cys Ser Leu
 355 360 365

Gly Ser Glu Pro Thr Ala Pro Gly Pro Ser Arg Arg Ser Trp Ser Ala
 370 375 380

Gly Pro Val Thr Ala Pro Leu Ala Ala Ser Thr Ala Ser Phe Ser Ala
 385 390 395 400

Val Lys Gly Ala Ser Glu Thr Thr Thr Lys Gly Thr Ser Thr Glu Leu
 405 410 415

Ala Pro Ala Thr Gly Pro Glu Glu Pro Ser Arg Phe Leu Arg Gly Ala
 420 425 430

Pro His Arg His Ser Met Pro Glu Leu Gly Leu Arg Ser Val Pro Glu
 435 440 445

Pro Pro Pro Glu Ser Pro Gly Gln Pro Asn Leu Arg Pro Asp Asp Ser
 450 455 460

Ala Phe Gly Arg Gln Ser Thr Pro Arg Val Ser Phe Arg Asp Pro Leu
 465 470 475 480

Val Ser Glu Gly Gly Pro Arg Arg Thr Leu Ser Ala Pro Pro Ala Gln
 485 490 495

Arg Arg Arg Pro Arg Ser Pro Pro Pro Arg Ala Pro Ser Arg Arg Arg
 500 505 510

His His His His Asn His His His His His Asn Arg His Pro Ser Arg
 515 520 525

Arg Arg His Tyr Gln Cys Asp Ala Gly Ser Gly Ser Asp Ser Glu Ser
 530 535 540

Cys Ser Ser Ser Pro Ser Ser Ser Ser Ser Glu Ser Ser Glu Asp Asp
 545 550 555 560

Gly Phe Phe Leu Gly Glu Arg Ile Pro Leu Pro Pro His Leu Cys Arg
 565 570 575

Pro Met Pro Ala Gln Asp Thr Ala Met Glu Thr Phe Asn Ser Pro Ser
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Leu Ser Leu Pro Arg Asp Ser Arg Ala Gly Met Pro Arg Gln Ala Arg
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Asp Lys Asn Cys Ile Val Ala
 610 615

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 <213> Drosophila melanogaster

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 Asn Arg Val Thr Gln Asp Gln Gly Thr Gln Pro Ala Ala Pro Gln Val
 35 40 45
 Pro Leu Gln Pro Leu Thr Ala Gly Asp Leu Gln Phe Leu Asn Leu Ser
 50 55 60
 Leu Arg Gln Arg Ser Leu Pro Arg Ser Met Lys Pro Phe Lys Asp Ala
 65 70 75 80
 His Asp Ile Ser Phe Thr Phe Asn Glu Leu Asp Thr Ser Ala Glu Pro
 85 90 95
 Glu Val Ala Thr Gly Ala Ala Gln Gln Glu Ser Asn Glu Cys Arg Thr
 100 105 110
 Pro Leu Thr Gln Ile Ser Tyr Leu Gln Lys Ile Pro Thr Leu Pro Arg
 115 120 125
 His Phe Ser Pro Ser Gly Gln Gly Leu Ala Thr Pro Pro Ala Leu Gly
 130 135 140
 Ser Gly Gly Met Gly Leu Pro Ser Ser Ser Ser Ala Ser Ala Leu Tyr
 145 150 155 160
 Ala Ala Gln Ala Ala Ala Gly Ile Leu Pro Thr Ser Pro Leu Pro Leu
 165 170 175
 Gln Arg His Gln Gln Tyr Leu Pro Pro His His Gln Gln His Pro Gly
 180 185 190
 Ala Gly Met Gly Pro Gly Pro Gly Ser Gly Ala Ala Ala Gly Pro Pro
 195 200 205
 Leu Gly Pro Gln Tyr Ser Pro Gly Cys Ser Ala Asn Pro Lys Tyr Ser
 210 215 220
 Asn Ala Gln Leu Pro Pro Pro Pro His His His His Gln Leu Ser Pro
 225 230 235 240
 Ala Leu Ser Thr Pro Ser Pro Pro Ser Leu Leu His His Pro Ala Gly
 245 250 255
 Gly Thr Ser Ser Ala Ser Ala His Ala Pro Phe Leu Gly Gly Pro His

260							265					270				
Met	Asp	Met	Gln	Arg	Gln	Ser	His	Ser	Asp	Asp	Asp	Ser	Gly	Cys	Ala	
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Leu	Glu	Glu	Tyr	Thr	Trp	Val	Pro	Pro	Gly	Leu	Arg	Pro	Asp	Gln	Val	
	290					295					300					
Arg	Leu	Tyr	Phe	Ser	Gln	Ile	Pro	Asp	Asp	Lys	Val	Pro	Tyr	Val	Asn	
305					310					315					320	
Ser	Pro	Gly	Glu	Gln	Tyr	Arg	Val	Arg	Gln	Leu	Leu	His	Gln	Leu	Pro	
				325					330					335		
Pro	His	Asp	Asn	Glu	Val	Arg	Tyr	Cys	His	Ser	Leu	Thr	Asp	Glu	Glu	
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Arg	Lys	Glu	Leu	Arg	Leu	Phe	Ser	Thr	Gln	Arg	Lys	Arg	Asp	Ala	Leu	
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Cys	Asp	Asp	Leu	Ile	Ser	Thr	Gly	Asp	Ile	Ala	Val	Phe	Ala	Thr	Arg	
385					390					395					400	
Leu	Gly	Pro	Asn	Ala	Ser	Trp	His	Pro	Ala	Cys	Phe	Ala	Cys	Ser	Val	
			405						410					415		
Cys	Arg	Glu	Leu	Leu	Val	Asp	Leu	Ile	Tyr	Phe	His	Arg	Asp	Gly	Arg	
			420					425					430			
Met	Tyr	Cys	Gly	Arg	His	His	Ala	Glu	Thr	Leu	Lys	Pro	Arg	Cys	Ser	
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Ala	Cys	Asp	Glu	Ile	Ile	Leu	Ala	Asp	Glu	Cys	Thr	Glu	Ala	Glu	Gly	
		450				455					460					
Arg	Ala	Trp	His	Met	Asn	His	Phe	Ala	Cys	His	Glu	Cys	Asp	Lys	Gln	
465					470					475					480	
Leu	Gly	Gly	Gln	Arg	Tyr	Ile	Met	Arg	Glu	Gly	Lys	Pro	Tyr	Cys	Leu	
			485						490					495		
His	Cys	Phe	Asp	Ala	Met	Phe	Ala	Glu	Tyr	Cys	Asp	Tyr	Cys	Gly	Glu	
			500					505					510			
Ala	Ile	Gly	Val	Asp	Gln	Gly	Gln	Met	Ser	His	Asp	Gly	Gln	His	Trp	
		515					520					525				
His	Ala	Thr	Asp	Glu	Cys	Phe	Ser	Cys	Asn	Thr	Cys	Arg	Cys	Ser	Leu	
		530				535					540					
Leu	Gly	Arg	Ala	Phe	Leu	Pro	Arg	Arg	Gly	Ala	Ile	Tyr	Cys	Ser	Ile	
545					550					555					560	
Ala	Cys	Ser	Lys	Gly	Glu	Pro	Pro	Thr	Pro	Ser	Asp	Ser	Ser	Gly	Thr	

565										570					575				
Gly	Met	Tyr	Thr	Thr	Pro	Thr	Pro	Pro	Thr	Gln	Arg	Val	Arg	Pro	His				
			580						585					590					
Pro	Gln	Ala	Pro	Leu	Pro	Ala	Arg	Ile	Pro	Ser	Ser	His	Ala	Ser	Ser				
		595					600					605							
Ser	Pro	Pro	Met	Ser	Pro	Gln	Gln	Gln	Gln	Gln	His	Gln	Ala	Thr	Phe				
	610					615					620								
Asn	Gln	Ala	Met	Tyr	Gln	Met	Gln	Ser	Gln	Gln	Met	Glu	Ala	Ala	Gly				
625					630						635				640				
Gly	Leu	Val	Asp	Gln	Ser	Lys	Ser	Tyr	Ala	Ala	Ser	Asp	Ser	Asp	Ala				
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Gly	Val	Val	Lys	Asp	Leu	Glu	His	Gly	Gly	His	Met	Gly	Gly	Gly	Asp				
			660					665						670					
Leu	Thr	Asp	Phe	Ser	Gly	Gly	Arg	Ala	Ser	Ser	Thr	Ser	Gln	Asn	Leu				
		675					680						685						
Ser	Pro	Leu	Asn	Ser	Pro	Gly	Asp	Phe	Gln	Pro	His	Phe	Leu	Pro	Lys				
		690				695					700								
Pro	Met	Glu	Leu	Gln	Arg	Gln	Leu	Leu	Glu	Asn	Pro	His	Thr	Ala	Ser				
705					710						715				720				
Met	Pro	Glu	Leu	Ala	Gly	Lys	Leu	Val	Ala	Pro	Pro	Ala	His	Met	Gln				
				725					730					735					
His	Leu	Ser	Gln	Leu	His	Ala	Val	Ser	Ser	His	Gln	Phe	Gln	Gln	His				
			740					745					750						
Glu	Tyr	Ala	Asp	Ile	Leu	His	Pro	Pro	Pro	Pro	Pro	Pro	Gly	Glu	Ile				
		755					760						765						
Pro	Glu	Leu	Pro	Thr	Pro	Asn	Leu	Ser	Val	Ala	Ser	Thr	Ala	Leu	Pro				
		770				775					780								
Pro	Glu	Leu	Met	Gly	Ser	Pro	Thr	His	Ser	Ala	Gly	Asp	Arg	Ser	Leu				
785					790						795				800				
Asn	Thr	Pro	Met	Ser	Thr	Gln	Ser	Ala	Ser	His	Ala	Pro	Pro	His	Pro				
				805					810					815					
Val	Ser	Ile	Leu	Ser	Gly	Ala	Ser	Ser	Ser	Ser	Pro	Met	Ser	Gly	Glu				
			820					825					830						
Pro	Ala	Lys	Lys	Lys	Gly	Val	Arg	Phe	Glu	Gly	Ile	Pro	Asp	Thr	Leu				
		835					840					845							
Pro	Arg	Ser	Arg	Ser	Tyr	Ser	Gly	Asn	Gly	Ala	Gly	Thr	Ser	Gly	Gly				
		850				855					860								
Gly	Glu	Arg	Glu	Arg	Asp	Arg	Asp	Lys	Asp	Lys	Glu	Gly	Gly	Gly	Arg				

865 870 875 880
 His Gly His Gly His Ser Ser Arg Arg Arg Arg Arg Arg Lys Ser Ser
 885 890 895
 Ser Ser Ser Ser His His Arg Ser Gly Ser Gly His Arg Ser His Ser
 900 905 910
 Thr Thr Arg Ala Asp Thr Tyr Ala Pro Ala Gln Pro Leu Ser Ser Ser
 915 920 925
 Tyr Gln Gly Pro Pro Ser Val Leu Gln Ala Ala Asn Leu Val His Glu
 930 935 940
 Ser Pro Ser Arg Gln Gln Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu
 945 950 955 960
 Glu Ser Glu Glu Ser Asp Val Cys Ser Thr Cys Ser Ser Ser Ser Ser
 965 970 975
 Ser Ser Glu Asp Tyr Met Met Met Tyr Gln Leu Pro Gln Arg Arg His
 980 985 990
 Tyr Gly Gly Val Arg Val Ser Tyr Val Pro Asn Asp Ala Leu Ala Tyr
 995 1000 1005
 Asp Arg Lys Arg Lys Pro Ser Glu Leu Gly Gly Asp Lys Asp Lys Asn
 1010 1015 1020
 Cys Ile Ile Ser
 1025

<210> 18
 <211> 1278
 <212> DNA
 <213> Homo sapiens

<400> 18
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 tctgttcccc gcccggttgt cctcgccctg ctgcgctgag tgtcccctgt tagcctcgac 180
 cccatggcgc tgcagacgct gcagagctcg tgggtgacct tccgcaagat cctgtctcac 240
 ttccccgagg agctgagctc ggctttcgtc tacggctccg ggggtgtaccg ccaggcaggg 300
 ccagttcag accagaagaa tgctatgctg gactttgtgt tcacagtaga tgaccctgtc 360
 gcatggcatt caaagaacct gaagaaaaat tggagtcact actctttcct aaaagtttta 420
 gggcccaaga ttatcacgct catccagaat aactatggcg ctggagttaa ctacaattca 480
 ttgatcatgt gtaatggtag gcttatcaaa tatggagtta ttagcactaa cgttctgatt 540
 gaagatctcc tcaactggaa taacttatac attgctggac gactccaaaa accgggtgaaa 600
 attatctcag tgaacgagga tgtcactctt agatcagccc tcgatagaaa tctgaagagt 660
 gctgtgaccg ctgctttcct catgctcccc gaaagctttt ctgaagaaga cctcttcata 720
 gagattgccg gtctctccta ttcaggtgac tttcggatgg tggttggaga agataaaaca 780
 aaagtgttga atattgtgaa gcccaatata gccactttc gagagctcta tggcagcata 840
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 agccagaag gacagttcac tcagctgatg acattgccca aaaccttaca gcaacagata 960
 aatcatatta tggacctcc tggaaaaaac agagatgtgg aagaaacttt attccaagtg 1020
 gctcatgatc ccgactgtgg agatgtggtg cgactagggc tttcagcaat cgtgagaccg 1080

tctagtataa gacagagcac gaaaggcatt tttactgctg gcctgaagaa gtcagtgatt 1140
 tatagttcac taaaactgca caaaatgtgg aaagggtggc tgaggaaaac atcctgattt 1200
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 aaaaaaaaaa aaaaaaaaaa 1278

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 <211> 337
 <212> PRT
 <213> Homo sapiens

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 20 25 30
 Gly Val Tyr Arg Gln Ala Gly Pro Ser Ser Asp Gln Lys Asn Ala Met
 35 40 45
 Leu Asp Phe Val Phe Thr Val Asp Asp Pro Val Ala Trp His Ser Lys
 50 55 60
 Asn Leu Lys Lys Asn Trp Ser His Tyr Ser Phe Leu Lys Val Leu Gly
 65 70 75 80
 Pro Lys Ile Ile Thr Ser Ile Gln Asn Asn Tyr Gly Ala Gly Val Tyr
 85 90 95
 Tyr Asn Ser Leu Ile Met Cys Asn Gly Arg Leu Ile Lys Tyr Gly Val
 100 105 110
 Ile Ser Thr Asn Val Leu Ile Glu Asp Leu Leu Asn Trp Asn Asn Leu
 115 120 125
 Tyr Ile Ala Gly Arg Leu Gln Lys Pro Val Lys Ile Ile Ser Val Asn
 130 135 140
 Glu Asp Val Thr Leu Arg Ser Ala Leu Asp Arg Asn Leu Lys Ser Ala
 145 150 155 160
 Val Thr Ala Ala Phe Leu Met Leu Pro Glu Ser Phe Ser Glu Glu Asp
 165 170 175
 Leu Phe Ile Glu Ile Ala Gly Leu Ser Tyr Ser Gly Asp Phe Arg Met
 180 185 190
 Val Val Gly Glu Asp Lys Thr Lys Val Leu Asn Ile Val Lys Pro Asn
 195 200 205
 Ile Ala His Phe Arg Glu Leu Tyr Gly Ser Ile Leu Gln Glu Asn Pro
 210 215 220
 Gln Val Val Tyr Lys Ser Gln Gln Gly Trp Leu Glu Ile Asp Lys Ser
 225 230 235 240

<400> 21

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Gly	Arg	His	Ser	Thr	Val	Cys	Pro	Thr	Gly	Gly	Pro	Pro	Ala	His	Gly	20	25	30	
Ala	Ala	Gly	Leu	His	Ser	Ser	Gly	Val	Gly	Leu	Arg	Arg	Ile	Leu	Ala	35	40	45	
His	Phe	Pro	Glu	Asp	Leu	Ser	Leu	Ala	Phe	Ala	Tyr	Gly	Ser	Ala	Val	50	55	60	
Tyr	Arg	Gln	Ala	Gly	Pro	Ser	Ala	His	Gln	Glu	Asn	Pro	Met	Leu	Asp	65	70	75	80
Leu	Val	Phe	Thr	Val	Asp	Asp	Pro	Val	Ala	Trp	His	Ala	Met	Asn	Leu	85	90	95	
Lys	Lys	Asn	Trp	Ser	His	Tyr	Ser	Phe	Leu	Lys	Leu	Leu	Gly	Pro	Arg	100	105	110	
Ile	Ile	Ser	Ser	Ile	Gln	Asn	Asn	Tyr	Gly	Ala	Gly	Val	Tyr	Phe	Asn	115	120	125	
Pro	Leu	Ile	Arg	Cys	Asp	Gly	Lys	Leu	Ile	Lys	Tyr	Gly	Val	Ile	Ser	130	135	140	
Thr	Gly	Thr	Leu	Ile	Glu	Asp	Leu	Leu	Asn	Trp	Asn	Asn	Leu	Tyr	Ile	145	150	155	160
Ala	Gly	Arg	Leu	Gln	Lys	Pro	Val	Lys	Ile	Val	Ser	Met	Asn	Glu	Asn	165	170	175	
Met	Ala	Leu	Arg	Ala	Ala	Leu	Asp	Lys	Asn	Leu	Arg	Ser	Ala	Val	Thr	180	185	190	
Thr	Ala	Cys	Leu	Met	Leu	Pro	Glu	Ser	Phe	Ser	Glu	Glu	Asp	Leu	Phe	195	200	205	
Ile	Glu	Ile	Ala	Gly	Leu	Ser	Tyr	Ser	Gly	Asp	Phe	Arg	Met	Val	Ile	210	215	220	
Gly	Glu	Glu	Lys	Ser	Lys	Val	Leu	Asn	Ile	Val	Lys	Pro	Asn	Val	Gly	225	230	235	240
His	Phe	Arg	Glu	Leu	Tyr	Glu	Ser	Ile	Leu	Gln	Lys	Asp	Pro	Gln	Val	245	250	255	
Val	Tyr	Lys	Met	His	Gln	Gly	Gln	Leu	Glu	Ile	Asp	Lys	Ser	Pro	Glu	260	265	270	
Gly	Gln	Phe	Thr	Gln	Leu	Met	Thr	Leu	Pro	Arg	Thr	Leu	Gln	Gln	Gln	275	280	285	
Ile	Asn	His	Ile	Met	Asp	Pro	Pro	Gly	Arg	Asn	Arg	Asp	Val	Glu	Glu	290	295	300	

Thr Leu Leu Gln Val Ala Gln Asp Pro Asp Cys Gly Asp Val Val Arg
 305 310 315 320

Leu Ala Ile Ser Ser Ile Val Arg Pro Ser Ser Ile Arg Gln Ser Thr
 325 330 335

Lys Gly Leu Phe Thr Ala Gly Met Lys Lys Ser Val Ile Tyr Ser Ser
 340 345 350

Arg Lys Leu Asn Lys Met Trp Lys Gly Trp Met Ser Lys Ala Ser
 355 360 365

<210> 22

<211> 383

<212> PRT

<213> Schizosaccharomyces pombe

<400> 22

Met Ile Phe Gly Lys Thr His Phe Leu Ser Tyr Asn Ile Leu Arg Tyr
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Ser Thr Lys Arg Trp Met Asn Arg His Ser Tyr Ser His His Ala Lys
 20 25 30

Cys Thr Val Ala Gln Leu Leu Lys Gln Asn Leu Leu Thr Phe Glu Asn
 35 40 45

Gln Arg Ile Gln Pro Glu Glu Glu Leu Lys Glu Asn Leu Thr Lys Val
 50 55 60

Val Asn Tyr Phe Gln Ala Pro Ile Asp Val Ala Val Gly Tyr Gly Ser
 65 70 75 80

Gly Val Phe Arg Gln Ala Gly Tyr Ser Gln Lys Glu Asn Pro Met Ile
 85 90 95

Asp Phe Ile Phe Gln Val Glu Asp Pro Val Lys Trp His Lys Ile Asn
 100 105 110

Leu Gln Gln Asn Pro Ser His Tyr Ser Phe Val Lys Asn Phe Gly Pro
 115 120 125

Gly Phe Val Ser Thr Leu Gln Glu Ser Phe Gly Thr Gly Val Tyr Tyr
 130 135 140

Asn Thr His Val Glu Val Glu Gly Asn Ile Ile Lys Tyr Gly Val Thr
 145 150 155 160

Ser Lys Lys Asp Val Tyr Glu Asp Leu Lys Asn Trp Asn Thr Met Tyr
 165 170 175

Leu Ala Gly Arg Phe Gln Lys Pro Val Val Ile Leu Lys Gly Glu Asp
 180 185 190

Glu Phe Tyr Lys Glu Asn Ser Tyr Asn Leu Ser Ser Ala Leu His Val

195	200	205
Gly Leu Leu Met Leu Ala Asp Arg Phe Thr Glu Phe Asp Leu Tyr Lys		
210	215	220
Thr Ile Val Ser Leu Ser Tyr Leu Gly Asp Ile Arg Met Ser Phe Phe		
225	230	235 240
Ala Glu Asn Pro Arg Lys Val Glu Asn Ile Val Ser Lys Gln Ile Ala		
	245	250 255
Phe Phe Arg Lys Leu Tyr Leu Pro Leu Leu Tyr Ala Glu Pro Gly Val		
	260	265 270
His Phe Ile Glu Ser Ser Glu Val Leu Lys Ser Met Asp Pro Ser Asp		
	275	280 285
Asn Ser Arg Tyr Leu Ser Phe His Gln Asn Ile Thr Lys Asp Ser Ile		
	290	295 300
Ser Arg Leu Leu Asn Gly Leu Pro Leu Asn Leu Val Lys Ile Leu Gly		
305	310	315 320
Leu Lys Pro Asp Thr Ser Ser Phe Glu Lys Cys Ala Glu Leu Met Leu		
	325	330 335
Thr Asn Gln Ile Ser Thr Arg Ser Leu Leu Ile Ser Lys Ser Ile Lys		
	340	345 350
Lys Leu Thr Ser Phe Ser Ile Leu Thr Gln Ser Ile Lys Gly Ile Phe		
	355	360 365
Thr Ala Arg Cys His Ser Phe Arg Trp Tyr Met Ser Met Arg Ser		
	370	375 380

<210> 23
 <211> 274
 <212> PRT
 <213> Caenorhabditis elegans

<400> 23
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 35 40 45
 Gln Glu Phe His Arg Asp Asn Ile Leu Lys Asn Pro Gln His Tyr Ser
 50 55 60
 Leu Leu Arg Leu Met Gly Pro Lys Met Ile Glu Lys Ile Gln Cys Asn
 65 70 75 80

Phe Ala Ala Arg Val Tyr Tyr Asn Thr His Val Lys Val Gly Lys Arg
 85 90 95
 Lys Ile Lys Tyr Gly Val Ile Ser Tyr Glu Asn Val Lys Gln Asp Leu
 100 105 110
 Leu Asp Trp Arg Trp Ile Tyr Ile Ser Gly Arg Leu His Lys Pro Val
 115 120 125
 Leu Glu Val Ile Lys Pro Arg Gln Asp Met Cys Asp Leu Val Thr Glu
 130 135 140
 Asn Arg Arg Ser Ala Leu His Ser Ser Leu Leu Leu Leu Pro Glu Ser
 145 150 155 160
 Phe Thr Leu Lys Gln Leu Phe His Lys Ile Val Gly Leu Ser Tyr Thr
 165 170 175
 Gly Asp Phe Arg Met Val Val Gly Glu Asp Lys Asn Lys Ile Asn Lys
 180 185 190
 Ile Val Glu Gly Asn Tyr Glu Glu Leu Leu Arg Val Tyr Glu Pro Leu
 195 200 205
 Met Asn Asp Asp Ala Arg Leu Ser Val Ile Phe Ser Leu Ala His Arg
 210 215 220
 His Asp Val Ala Ala Thr Val Glu Thr Ala Ile Gly Gly Ile Ile Arg
 225 230 235 240
 Pro Val Ser Leu Ser Gln Thr Ala Lys Asn Ala Phe Ser Ala Gly Val
 245 250 255
 Thr Arg Ser Ile Ile Tyr Ser Met Ala Lys Met Ser Lys Phe Leu Lys
 260 265 270

Ser Lys

<210> 24

<211> 647

<212> PRT

<213> Drosophila melanogaster

<400> 24

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 Tyr Gly Lys Val Gly Asn Gly Asn Asn Leu Arg Pro Pro Pro Gly Thr
 35 40 45
 Val Val Asp Leu Val Phe Cys Val Arg Asp Ala Arg Gly Phe His Ala
 50 55 60

Glu Asn Leu His Arg His Pro Asp His Tyr Ser Ala Leu Arg His Leu
 65 70 75 80
 Gly Pro Asn Phe Val Ala Lys Tyr Gln Glu Arg Leu Gly Ala Gly Val
 85 90 95
 Tyr Cys Asn Thr Leu Val Pro Leu Pro Asp Val Gly Ile Thr Ile Lys
 100 105 110
 Tyr Gly Val Val Ser Gln Glu Glu Leu Leu Glu Asp Leu Leu Asp Trp
 115 120 125
 Arg His Leu Tyr Leu Ala Gly Arg Leu His Lys Pro Val Thr Asn Leu
 130 135 140
 Val Asn Pro Ser Asp Asn Pro Pro Leu Lys Ala Ala Leu Glu Arg Asn
 145 150 155 160
 Leu Val Ser Ala Leu Gln Val Ala Leu Leu Leu Pro Glu Lys Phe
 165 170 175
 Thr Ala Tyr Gly Leu Phe His Thr Ile Ala Gly Leu Ser Tyr Lys Gly
 180 185 190
 Asp Phe Arg Met Ile Phe Gly Glu Asn Lys Gln Lys Val His Asn Ile
 195 200 205
 Val Ser Pro Gln Ile Asn Asp Phe Phe Ala Leu Tyr Gln Pro Ser Leu
 210 215 220
 Gly Gln Leu Ser Asp Tyr Val Ala Val Asn Met Lys Gly Gln Glu Pro
 225 230 235 240
 Gly Ser Arg Lys Pro Ala Ile Ile Phe Glu Gln Asp Lys Ser Ser Ser
 245 250 255
 Ala Thr Cys Gln His Leu Arg Gln Leu Pro Arg Glu Leu Gln Lys Arg
 260 265 270
 Leu Gln Arg Asn Ala Ala Cys Arg Gly Asp Tyr Thr Gln Val Val Asn
 275 280 285
 His Leu Ser Met Ala Ser Gln Leu Pro Glu Val Leu Gln Ala Ser Val
 290 295 300
 Asn Asp Ile Ile Met Ser Ser Asp Asp Asn Ser Ser Asp Ser Asn Ser
 305 310 315 320
 Ser Ser Asp Glu Arg Gln Arg Lys Arg Lys Leu Lys Lys His Ser Lys
 325 330 335
 Asp Val Asp Lys Ser Lys Lys Lys Lys Ser Lys Lys His Lys Lys Glu
 340 345 350
 Lys Arg Arg His Lys Glu Lys Lys Arg Ser Lys His Glu Glu Glu Pro
 355 360 365

Pro Val Pro Tyr Thr Gln Pro Pro His Leu Ile Asn Ala Ser Pro Pro
 370 375 380
 Asp Val Ala Thr Asn Asn Glu Asp Ser Phe Gly Pro Ala Leu Pro Pro
 385 390 395 400
 His Leu Arg Lys Thr Gln Gln Pro Glu Leu Pro Glu Gln Ser Gln Pro
 405 410 415
 Ala Pro Gln Pro Gln Ala Met Ile Gly Pro Val Leu Pro Ser Asn Leu
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 Thr Arg Glu Lys Ser Pro Thr Lys Glu Ala Glu Ala Glu Asp Asp Asp
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 Asp Leu Ala Gly Thr Phe Gly Pro Leu Pro Asn Ala Ser Gln Val Ala
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 Leu Glu Glu Arg Ala Leu Ala Leu Lys Leu Ala Ala Leu Glu Gly Gly
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 Gly Leu Gly Thr Ser Thr Asp Gln Asp Val Arg Glu Glu Trp Met Leu
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 Glu Leu Pro Asp Val Gly Leu Lys Ser Gly Leu Ala Ala Leu Ser Asn
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 Met Lys Arg Thr Phe Tyr Gln Gly Lys Glu Arg Pro Asp Phe Ser Asp
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 Arg Ser Ser Trp Thr Lys Thr Pro Gln Ser Glu Ala Asp Ala Ala Ala
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 Ser Gly Pro Lys Ser Leu Ser Ser Lys Glu Leu Glu Gln Met Ala Gln
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 Val Lys Tyr Glu Gln Gln Arg Asp Asp Glu Gln Glu Ser Met Ala Lys
 565 570 575
 Arg His Lys Lys Lys His Lys Arg Glu Glu Ser Leu Val Glu Leu His
 580 585 590
 Gln Lys Lys Leu Arg Lys Glu Gln Arg Glu Lys Pro Glu Arg Arg Pro
 595 600 605
 Phe Ser Arg Asp Val Asp Leu Lys Leu Asn Lys Ile Asp Lys Asn Gln
 610 615 620
 Thr Lys Gln Ile Val Asp Lys Ala Lys Ile Leu Asn Thr Lys Phe Ser
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 Arg Gly Gln Ala Lys Tyr Leu
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<210> 25

<211> 332
 <212> PRT
 <213> Arabidopsis thaliana

<400> 25
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 Asn Gln Asp Lys Ser Lys Met Val Asp Tyr Ile Leu Gly Val Ser Asp
 35 40 45
 Pro Ile Lys Trp His Ser Ala Asn Leu Lys Met Asn Ser Asp His Tyr
 50 55 60
 Ala Ser Trp Met Val His Leu Gly Gly Ala Arg Leu Ile Thr Asn Val
 65 70 75 80
 Ala Asp Lys Val Gly Val Gly Val His Phe Asn Pro Phe Val Asn Trp
 85 90 95
 Asn Asp Arg Lys Leu Lys Tyr Gly Val Val Arg Met His Asp Leu Val
 100 105 110
 Gln Asp Ile Leu Asp Trp Lys Arg Phe Tyr Leu Ser Gly Arg Leu Gln
 115 120 125
 Lys Pro Val His Met Leu Val Asp Asn Leu Asp Ile Glu Asp Val Asn
 130 135 140
 Ser Val Asn Lys Arg Ala Ala Ile Ser Ala Ala Leu Leu Leu Leu Pro
 145 150 155 160
 Ser Lys Phe Thr Glu Glu Asp Leu Tyr Ala Lys Ile Cys Ser Leu Ser
 165 170 175
 Tyr Met Gly Asp Leu Arg Met Phe Phe Ala Glu Asp Thr Asn Lys Val
 180 185 190
 Asn Lys Ile Val Lys Gly Gln Phe Asp Leu Phe Gln Ser Met Tyr Lys
 195 200 205
 Pro Phe Leu Glu Glu Cys Glu Thr Lys Asn Leu Leu Arg Phe Ser Ser
 210 215 220
 Ala Glu Ala Ser His Thr Lys Leu Val Gln Asp Ser Ser Leu Ser Ala
 225 230 235 240
 Thr Arg Ser Leu Val Ser Ser Leu Pro Ala Ser Val Arg Ser Gln Met
 245 250 255
 Gly Lys Ser Leu Gly Glu Lys Lys Phe Val Ser Glu Thr Gly Arg Val
 260 265 270
 Met Gly Glu Val Cys Ile Ser Ser Arg Glu Glu Ala Ala Lys Cys Met

275

280

285

Glu Lys Val Met Arg Arg Arg Val Met Val Ser Ser Gly Arg Gln Ala
 290 295 300

Val Ser Gly Phe Leu Ala Ala Gly Ala Ile Asn Ala Thr Met Tyr Leu
 305 310 315 320

Ser Gln Lys Met Arg Lys Ala Trp Asn Ser Arg Ala
 325 330

<210> 26

<211> 983

<212> DNA

<213> Homo sapiens

<400> 26

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<210> 27

<211> 184

<212> PRT

<213> Homo sapiens

<400> 27

Met Ala Ser Pro Ala Ala Ser Ser Val Arg Pro Pro Arg Pro Lys Lys
 1 5 10 15

Glu Pro Gln Thr Leu Val Ile Pro Lys Asn Ala Ala Glu Glu Gln Lys
 20 25 30

Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45

Pro Glu Lys Met Ser Glu Trp Ala Pro Arg Pro Pro Pro Glu Phe Val
 50 55 60

Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80

Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
85 90 95

Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
100 105 110

Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
115 120 125

Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
130 135 140

Lys Leu Glu Gln Lys Lys Gln Glu Gly Pro Gly Gln Pro Lys Glu Gln
145 150 155 160

Gly Ser Ser Ser Ser Ala Glu Ala Ser Gly Thr Glu Glu Glu Glu Glu
165 170 175

Val Pro Ser Phe Thr Met Gly Arg
180

<210> 28
<211> 983
<212> DNA
<213> Homo sapiens

<400> 28
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atccaatttt tgcttctcag ccatggcatc catgtagtcc tgctgctgat attctctccg 660
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caagtatgac gacacagccg cgg 983

<210> 29
<211> 184
<212> PRT
<213> Homo sapiens

<400> 29
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 20 25 30
 Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45
 Pro Glu Lys Met Ser Glu Trp Ala Pro Arg Pro Pro Pro Glu Phe Val
 50 55 60
 Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80
 Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95
 Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110
 Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125
 Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140
 Lys Leu Glu Gln Lys Lys Gln Glu Gly Pro Gly Gln Pro Lys Glu Gln
 145 150 155 160
 Gly Ser Ser Ser Ser Ala Glu Ala Ser Gly Thr Glu Glu Glu Glu Glu
 165 170 175
 Val Pro Ser Phe Thr Met Gly Arg
 180

<210> 30
 <211> 186
 <212> PRT
 <213> Mus musculus

<400> 30
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 Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45
 Pro Glu Lys Met Asn Glu Trp Ala Pro Arg Ala Pro Pro Glu Phe Val
 50 55 60
 Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80
 Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95

Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110
 Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125
 Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140
 Lys Leu Glu Gln Lys Lys Gln Lys Glu Glu Pro Ser Gln Cys Gln Glu
 145 150 155 160
 Gln His Ala Ser Ser Ser Asp Glu Ala Ser Glu Thr Glu Glu Glu Glu
 165 170 175
 Glu Glu Pro Ser Val Leu Ile Met Gly Arg
 180 185

<210> 31
 <211> 186
 <212> PRT
 <213> Mus musculus

<400> 31
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 Glu Pro Gln Thr Leu Val Ile Pro Lys Asn Ala Ala Glu Glu Gln Lys
 20 25 30
 Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45
 Pro Glu Lys Met Asn Glu Trp Ala Pro Arg Ala Pro Pro Glu Phe Val
 50 55 60
 Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80
 Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95
 Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110
 Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125
 Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140
 Lys Leu Glu Gln Lys Lys Gln Lys Glu Glu Pro Ser Gln Cys Gln Glu
 145 150 155 160
 Gln His Ala Ser Ser Ser Asp Glu Ala Ser Glu Thr Glu Glu Glu Glu

Leu Lys Leu Glu Lys Leu Met Lys Asn Pro Asp Lys Pro Val Val Ile
 50 55 60
 Pro Glu Gln Arg Arg Glu Arg Asp Phe Met Ser Ser Val Pro Thr Phe
 65 70 75 80
 Val Arg Asn Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe
 85 90 95
 His Val Tyr Arg His Leu Arg Arg Lys Glu Tyr Ala Arg Gln Lys Asn
 100 105 110
 Ile Gln Asn Gln Ser Ala Arg Glu Ala Ala Asp Glu Ala Tyr Gln Gln
 115 120 125
 Lys Leu Asp Asp Asn Arg Arg Ala Ala Glu Glu Lys Thr Ala Lys Lys
 130 135 140
 Arg Ala Lys Arg Leu Lys Arg Lys Gln Arg Ala Lys Lys Pro Arg Glu
 145 150 155 160
 Asp Lys Lys Pro Leu Ala Lys Glu Ala Ser Glu Asp Ser Asn Thr Asp
 165 170 175
 Ser Glu Glu Glu Pro Thr Glu Glu Lys Ala Glu Ser Ser Pro Glu Glu
 180 185 190
 Gly Gln Gln Val Ala Ser Lys Glu Ser Asp Asp Asn Asn Thr Gln Glu
 195 200 205
 Thr Ser Asn Glu Glu Ala Val Asn Ser Asn Thr Glu Ala Lys Ser Ala
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 Glu Asp Thr Asn Ala Val Glu Leu Asp Ser Thr Glu Ala Thr Lys Glu
 225 230 235 240
 Ser Gln Asn Val Asp Gln Glu Gln Asp Lys Pro Val Pro
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<210> 34
 <211> 2456
 <212> DNA
 <213> Homo sapiens

<400> 34
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 ctccggcggt ttgcatttcc tctgagcctg tttcagggca gtagtgatgg agtggagggt 480
 cgatatgatt tactggattg tcatatcagc atctgttctc ctcagggtggc acaactcttt 540
 acagacaact ttgactacca aactcgagat gactttgtgc gaggtctctt agtgaatgag 600

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aagtatgtga ccagaatcac atgatagcct ttccttaaca cctggggggag agggaggacg 2400
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<210> 35
 <211> 366
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Ala Gly Ala Gln Ile His Gln Ser Leu Leu Cys Asp Asn Ala Glu Val
 50 55 60
 Lys Glu Arg Val Thr Leu Lys Pro Arg Ser Val Leu Thr Ser Gln Val
 65 70 75 80
 Val Val Gly Pro Asn Ile Thr Leu Pro Glu Gly Ser Val Ile Ser Leu
 85 90 95

His	Pro	Pro	Asp	Ala	Glu	Glu	Asp	Glu	Asp	Asp	Gly	Glu	Phe	Ser	Asp		
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Asp	Ser	Gly	Ala	Asp	Gln	Glu	Lys	Asp	Lys	Val	Lys	Met	Lys	Gly	Tyr		
		115					120					125					
Asn	Pro	Ala	Glu	Val	Gly	Ala	Ala	Gly	Lys	Gly	Tyr	Leu	Trp	Lys	Ala		
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Gly	Leu	Lys	Ile	Asn	Met	Glu	Glu	Glu	Ser	Glu	Ser	Glu	Ser	Glu	Gln		
			165						170						175		
Ser	Met	Asp	Ser	Glu	Glu	Pro	Asp	Ser	Arg	Gly	Gly	Ser	Pro	Gln	Met		
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Ser	Leu	Lys	Tyr	Ala	Tyr	Asn	Ile	Ser	Leu	Lys	Glu	Val	Met	Gln	Val		
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			245					250						255			
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			260					265						270			
Trp	Ser	Pro	Val	Phe	Arg	Asn	Tyr	Ile	Lys	Arg	Ala	Ala	Asp	His	Leu		
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Glu	Ala	Leu	Ala	Ala	Ile	Glu	Asp	Phe	Phe	Leu	Glu	His	Glu	Ala	Leu		
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Gly	Ile	Ser	Met	Ala	Lys	Val	Leu	Met	Ala	Phe	Tyr	Gln	Leu	Glu	Ile		
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Leu	Ala	Glu	Glu	Thr	Ile	Leu	Ser	Trp	Phe	Ser	Gln	Arg	Asp	Thr	Thr		
			325					330						335			
Asp	Lys	Gly	Gln	Gln	Leu	Arg	Lys	Asn	Gln	Gln	Leu	Gln	Arg	Phe	Ile		
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 <212> DNA
 <213> Homo sapiens

<400> 36

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tccactccat cactactgcc ctgaaacagg ctcagaggaa atgcaaaacg ccggagaccc 2040
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tcttcgtggc aacgagttgg gtggctgggg gatgactcct tgaagatcat cgtcatcaca 2160
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atgtttgaga tgacatcccc ataccacaga agaaagtcag agcgcaccaa agccttggca 2280
tcaacatcac ggaggacatc tcccagtgat cgatagagct ctgatgtaat tattcgaacc 2340
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<210> 37

<211> 641

<212> PRT

<213> Homo sapiens

<400> 37

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                20                      25                      30
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Arg Pro Thr Ser Leu Asn Val Val Arg Ile Ile Thr Ser Glu Leu Tyr
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Arg Ser Asp Phe Leu Leu Val Tyr Gly Asp Val Ile Ser Asn Ile Asn 65 70 75 80		
Ile Thr Arg Ala Leu Glu Glu His Arg Leu Arg Arg Lys Leu Glu Lys 85 90 95		
Asn Val Ser Val Met Thr Met Ile Phe Lys Glu Ser Ser Pro Ser His 100 105 110		
Pro Thr Arg Cys His Glu Asp Asn Val Val Val Ala Val Asp Ser Thr 115 120 125		
Thr Asn Arg Val Leu His Phe Gln Lys Thr Gln Gly Leu Arg Arg Phe 130 135 140		
Ala Phe Pro Leu Ser Leu Phe Gln Gly Ser Ser Asp Gly Val Glu Val 145 150 155 160		
Arg Tyr Asp Leu Leu Asp Cys His Ile Ser Ile Cys Ser Pro Gln Val 165 170 175		
Ala Gln Leu Phe Thr Asp Asn Phe Asp Tyr Gln Thr Arg Asp Asp Phe 180 185 190		
Val Arg Gly Leu Leu Val Asn Glu Glu Ile Leu Gly Asn Gln Ile His 195 200 205		
Met His Val Thr Ala Lys Glu Tyr Gly Ala Arg Val Ser Asn Leu His 210 215 220		
Met Tyr Ser Ala Val Cys Ala Asp Val Ile Arg Arg Trp Val Tyr Pro 225 230 235 240		
Leu Thr Pro Glu Ala Asn Phe Thr Asp Ser Thr Thr Gln Ser Cys Thr 245 250 255		
His Ser Arg His Asn Ile Tyr Arg Gly Pro Glu Val Ser Leu Gly His 260 265 270		
Gly Ser Ile Leu Glu Glu Asn Val Leu Leu Gly Ser Gly Thr Val Ile 275 280 285		
Gly Ser Asn Cys Phe Ile Thr Asn Ser Val Ile Gly Pro Gly Cys His 290 295 300		
Ile Gly Asp Asn Val Val Leu Asp Gln Thr Tyr Leu Trp Gln Gly Val 305 310 315 320		
Arg Val Ala Ala Gly Ala Gln Ile His Gln Ser Leu Leu Cys Asp Asn 325 330 335		
Ala Glu Val Lys Glu Arg Val Thr Leu Lys Pro Arg Ser Val Leu Thr		

340					345					350						
Ser	Gln	Val	Val	Val	Gly	Pro	Asn	Ile	Thr	Leu	Pro	Glu	Gly	Ser	Val	
355					360					365						
Ile	Ser	Leu	His	Pro	Pro	Asp	Ala	Glu	Glu	Asp	Glu	Asp	Asp	Gly	Glu	
370					375					380						
Phe	Ser	Asp	Asp	Ser	Gly	Ala	Asp	Gln	Glu	Lys	Asp	Lys	Val	Lys	Met	
385					390					395					400	
Lys	Gly	Tyr	Asn	Pro	Ala	Glu	Val	Gly	Ala	Ala	Gly	Lys	Gly	Tyr	Leu	
405					410					415						
Trp	Lys	Ala	Ala	Gly	Met	Asn	Met	Glu	Glu	Glu	Glu	Glu	Leu	Gln	Gln	
420					425					430						
Asn	Leu	Trp	Gly	Leu	Lys	Ile	Asn	Met	Glu	Glu	Glu	Ser	Glu	Ser	Glu	
435					440					445						
Ser	Glu	Gln	Ser	Met	Asp	Ser	Glu	Glu	Pro	Asp	Ser	Arg	Gly	Gly	Ser	
450					455					460						
Pro	Gln	Met	Asp	Asp	Ile	Lys	Val	Phe	Gln	Asn	Glu	Val	Leu	Gly	Thr	
465					470					475					480	
Leu	Gln	Arg	Gly	Lys	Glu	Glu	Asn	Ile	Ser	Cys	Asp	Asn	Leu	Val	Leu	
485					490					495						
Glu	Ile	Asn	Ser	Leu	Lys	Tyr	Ala	Tyr	Asn	Val	Ser	Leu	Lys	Glu	Val	
500					505					510						
Met	Gln	Val	Leu	Ser	His	Val	Val	Leu	Glu	Phe	Pro	Leu	Gln	Gln	Met	
515					520					525						
Asp	Ser	Pro	Leu	Asp	Ser	Ser	Arg	Tyr	Cys	Ala	Leu	Leu	Leu	Pro	Leu	
530					535					540						
Leu	Lys	Ala	Trp	Ser	Pro	Val	Phe	Arg	Asn	Tyr	Ile	Lys	Arg	Ala	Ala	
545					550					555					560	
Asp	His	Leu	Glu	Ala	Leu	Ala	Ala	Ile	Glu	Asp	Phe	Phe	Leu	Glu	His	
565					570					575						
Glu	Ala	Leu	Gly	Ile	Ser	Met	Ala	Lys	Val	Leu	Met	Ala	Phe	Tyr	Gln	
580					585					590						
Leu	Glu	Ile	Leu	Ala	Glu	Glu	Thr	Ile	Leu	Ser	Trp	Phe	Ser	Gln	Arg	
595					600					605						
Asp	Thr	Thr	Asp	Lys	Gly	Gln	Gln	Leu	Arg	Lys	Asn	Gln	Gln	Leu	Gln	
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 <212> PRT
 <213> Oryctolagus cuniculus

<400> 38
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 Arg Gly Ala Glu Glu Glu Ser Pro Pro Pro Leu Gln Ala Val Leu Val
 35 40 45
 Ala Asp Ser Phe Asn Arg Arg Phe Phe Pro Ile Ser Lys Asp Gln Pro
 50 55 60
 Arg Val Leu Leu Pro Leu Ala Asn Val Ala Leu Ile Asp Tyr Thr Leu
 65 70 75 80
 Glu Phe Leu Thr Ala Thr Gly Val Gln Glu Thr Phe Val Phe Cys Cys
 85 90 95
 Trp Lys Ala Ala Gln Ile Lys Glu His Leu Gln Lys Ser Lys Trp Cys
 100 105 110
 Arg Pro Thr Ser Leu Asn Val Val Arg Ile Ile Thr Ser Glu Leu Tyr
 115 120 125
 Arg Ser Leu Gly Asp Val Leu Arg Asp Val Asp Ala Lys Ala Leu Val
 130 135 140
 Arg Ser Asp Phe Leu Leu Val Tyr Gly Asp Val Val Ser Asn Ile Asn
 145 150 155 160
 Val Thr Arg Ala Leu Glu Glu His Arg Leu Arg Arg Lys Leu Glu Lys
 165 170 175
 Asn Val Ser Val Met Thr Met Ile Phe Lys Glu Ser Ser Pro Ser His
 180 185 190
 Pro Thr Arg Cys His Glu Asp Asn Val Val Val Ala Val Asp Ser Ala
 195 200 205
 Thr Asn Arg Ile Leu His Phe Gln Lys Thr Gln Gly Leu Arg Arg Phe
 210 215 220
 Ser Phe Pro Leu Ser Leu Phe Gln Gly Ser Gly Ala Gly Val Glu Ile
 225 230 235 240
 Arg Tyr Asp Leu Leu Asp Cys His Ile Ser Ile Cys Ser Pro Gln Val
 245 250 255

Ala	Gln	Leu	Phe	Thr	Asp	Asn	Phe	Asp	Tyr	Gln	Thr	Arg	Asp	Asp	Phe	260	265	270	
Val	Arg	Gly	Leu	Leu	Val	Asn	Glu	Glu	Ile	Leu	Gly	Asn	Gln	Ile	His	275	280	285	
Met	His	Val	Thr	Thr	Arg	Glu	Tyr	Gly	Ala	Arg	Val	Ser	Asn	Leu	His	290	295	300	
Met	Tyr	Ser	Ala	Val	Cys	Ala	Asp	Val	Ile	Arg	Arg	Trp	Val	Tyr	Pro	305	310	315	320
Leu	Thr	Pro	Glu	Ala	Asn	Phe	Thr	Asp	Ser	Thr	Ala	Gln	Ser	Cys	Thr	325	330	335	
His	Ser	Arg	His	Asn	Ile	Tyr	Arg	Gly	Pro	Glu	Val	Ser	Leu	Gly	His	340	345	350	
Gly	Ser	Ile	Leu	Glu	Glu	Asn	Val	Leu	Leu	Gly	Ser	Gly	Thr	Val	Ile	355	360	365	
Gly	Ser	Asn	Cys	Ser	Ile	Thr	Asn	Ser	Val	Ile	Gly	Pro	Gly	Cys	Cys	370	375	380	
Ile	Gly	Asp	Asn	Val	Val	Leu	Asp	Arg	Ala	Tyr	Leu	Trp	Lys	Gly	Val	385	390	395	400
Gln	Val	Ala	Ser	Gly	Ala	Gln	Ile	His	Gln	Ser	Leu	Leu	Cys	Asp	His	405	410	415	
Ala	Glu	Val	Lys	Glu	Gln	Val	Thr	Leu	Lys	Pro	His	Cys	Val	Leu	Thr	420	425	430	
Ser	Gln	Val	Val	Val	Gly	Pro	Asn	Ile	Thr	Leu	Pro	Glu	Gly	Ser	Val	435	440	445	
Ile	Ser	Leu	His	Pro	Pro	Asp	Ala	Glu	Glu	Asp	Glu	Asp	Asp	Gly	Gln	450	455	460	
Phe	Ser	Asp	Asp	Ser	Gly	Val	Asn	Gln	Ala	Lys	Glu	Lys	Ala	Lys	Leu	465	470	475	480
Lys	Gly	Tyr	Asn	Pro	Ala	Glu	Val	Gly	Val	Ala	Gly	Lys	Gly	Tyr	Leu	485	490	495	
Trp	Lys	Ala	Ala	Asp	Met	Asn	Thr	Glu	Lys	Glu	Glu	Glu	Leu	Arg	Gln	500	505	510	
Ser	Leu	Trp	Gly	Leu	Thr	Ile	Asn	Glu	Glu	Glu	Glu	Ser	Glu	Thr	Glu	515	520	525	
Ser	Glu	Arg	Ser	Met	Asp	Ser	Glu	Glu	Leu	Asp	Ser	Arg	Ala	Gly	Ser	530	535	540	
Pro	Gln	Leu	Asp	Asp	Ile	Lys	Val	Phe	Gln	Asn	Glu	Val	Leu	Gly	Thr	545	550	555	560

Leu Gln Arg Gly Lys Glu Glu Ser Ile Ser Cys Asp Asn Leu Ile Leu
 565 570 575
 Glu Ile Asn Ser Leu Lys Tyr Ala Tyr Asn Ile Ser Leu Lys Glu Val
 580 585 590
 Met Gln Val Leu Ser His Val Val Leu Glu Phe Pro Leu Gln Gln Met
 595 600 605
 Asp Ser Pro Leu Glu Ala Asn Arg Tyr Cys Ala Leu Leu Leu Pro Leu
 610 615 620
 Leu Lys Ala Trp Ser Pro Val Phe Arg Asn Tyr Ile Lys Arg Ala Ala
 625 630 635 640
 Asp His Leu Glu Ala Leu Ala Ala Ile Glu Glu Phe Phe Leu Glu His
 645 650 655
 Glu Ala Leu Gly Thr Cys Ile Ala Lys Val Leu Met Gly Phe Tyr Gln
 660 665 670
 Leu Glu Ile Leu Ala Glu Glu Thr Ile Leu Ser Trp Phe Gly Gln Arg
 675 680 685
 Asp Val Thr Asp Lys Gly Arg Gln Leu Arg Lys Asn Gln Gln Leu Gln
 690 695 700
 Arg Phe Ile Gln Trp Leu Lys Glu Ala Glu Glu Glu Ser Ser Glu Asp
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Asp

<210> 39
 <211> 716
 <212> PRT
 <213> Rattus norvegicus

<400> 39
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 Glu Pro Pro Pro Pro Leu Gln Ala Val Leu Val Ala Asp Ser Phe Asp
 35 40 45
 Arg Arg Phe Phe Pro Ile Ser Lys Asp Gln Pro Arg Val Leu Leu Pro
 50 55 60
 Leu Ala Asn Val Ala Leu Ile Asp Tyr Thr Leu Glu Phe Leu Thr Ala
 65 70 75 80
 Thr Gly Val Gln Glu Thr Phe Val Phe Cys Cys Trp Lys Ala Ala Gln
 85 90 95

Ile	Lys	Glu	His	Leu	Gln	Lys	Ser	Lys	Trp	Cys	His	Pro	Thr	Ser	Leu	100	105	110
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Val	Leu	Arg	Asp	Val	Asp	Ala	Lys	Ala	Leu	Val	Arg	Ser	Asp	Phe	Leu	130	135	140
Leu	Ile	Tyr	Gly	Asp	Val	Val	Ser	Asn	Ile	Asn	Ile	Ser	Lys	Ala	Leu	145	150	155
Glu	Glu	His	Arg	Leu	Arg	Arg	Lys	Leu	Glu	Lys	Asn	Val	Ser	Val	Met	165	170	175
Thr	Met	Val	Phe	Lys	Glu	Ser	Ser	Pro	Ser	His	Pro	Thr	Arg	Cys	His	180	185	190
Glu	Asp	Asn	Val	Val	Leu	Ala	Val	Asp	Ser	Thr	Thr	Asn	Arg	Ile	Leu	195	200	205
His	Phe	Gln	Lys	Thr	Gln	Gly	Leu	Arg	His	Phe	Ser	Phe	Pro	Leu	Gly	210	215	220
Leu	Phe	Gln	Gly	Ser	Leu	Asp	Gly	Val	Glu	Ile	Arg	Tyr	Asp	Leu	Leu	225	230	235
Asp	Cys	His	Ile	Ser	Ile	Cys	Ser	Pro	Gln	Val	Ala	Gln	Leu	Phe	Thr	245	250	255
Asp	Asn	Phe	Asp	Tyr	Gln	Thr	Arg	Asp	Asp	Phe	Val	Arg	Gly	Leu	Leu	260	265	270
Val	Asn	Glu	Glu	Ile	Leu	Gly	Asn	Gln	Ile	His	Leu	His	Val	Thr	Ser	275	280	285
Arg	Glu	Tyr	Gly	Ser	Arg	Val	Ser	Asn	Leu	His	Met	Tyr	Ser	Ala	Val	290	295	300
Cys	Thr	Asp	Val	Ile	Arg	Arg	Trp	Val	Tyr	Pro	Leu	Thr	Pro	Glu	Val	305	310	315
Asn	Phe	Thr	Asp	Ser	Ser	Thr	Gln	Ser	Tyr	Thr	His	Ser	Arg	His	Asn	325	330	335
Ile	Tyr	Arg	Gly	Pro	Glu	Val	Ser	Leu	Gly	His	Gly	Ser	Val	Leu	Glu	340	345	350
Glu	Asn	Val	Leu	Leu	Gly	Ala	Gly	Thr	Val	Val	Gly	Ser	Asn	Cys	Ser	355	360	365
Ile	Thr	Asn	Ser	Val	Ile	Gly	Pro	Asn	Cys	His	Ile	Gly	Asp	Asn	Val	370	375	380
Val	Leu	Asp	Gln	Ala	Tyr	Leu	Trp	Gln	Gly	Val	Arg	Val	Ala	Ala	Gly	385	390	395

Ala Gln Ile His Gln Ser Leu Leu Cys Asp Arg Ala Glu Val Lys Glu
 405 410 415
 Arg Val Ile Leu Lys Pro His Cys Val Leu Thr Ser Gln Val Val Val
 420 425 430
 Gly Pro Asp Ile Ile Leu Pro Glu Gly Ser Val Ile Ser Leu His Pro
 435 440 445
 Pro Asp Ala Glu Glu Asp Glu Asp Asp Gly Gln Phe Ser Asp Asp Ser
 450 455 460
 Gly Ala Asp Gln Glu Lys Glu Lys Val Lys Leu Lys Gly Tyr Asn Pro
 465 470 475 480
 Ala Glu Val Gly Pro Glu Gly Gln Gly Tyr Leu Trp Lys Ala Glu Asp
 485 490 495
 Val Asp Glu Lys Glu Asp Glu Glu Leu Arg Gln Ser Leu Trp Gly Leu
 500 505 510
 Met Ile Asn Met Glu Glu Glu Ser Glu Thr Glu Ser Glu Arg Ser Val
 515 520 525
 Asp Pro Glu Glu Leu Asp Ser Arg Ala Gly Ser Pro Gln Leu Asp Asp
 530 535 540
 Ile Arg Val Phe Gln Asn Glu Val Leu Gly Thr Leu Gln Arg Gly Arg
 545 550 555 560
 Glu Glu Asn Ile Ser Cys Asp Asn Leu Val Leu Glu Ile Asn Ser Leu
 565 570 575
 Lys Tyr Ala Tyr Asn Ile Ser Leu Lys Glu Val Met Gln Val Leu Ser
 580 585 590
 His Val Val Leu Glu Phe Pro Leu Gln Gln Val Asp Gly Val Leu Asp
 595 600 605
 Pro Asn Arg Tyr Cys Ala Leu Leu Leu Pro Leu Leu Lys Ala Trp Ser
 610 615 620
 Pro Val Phe Arg Asn Tyr Ile Lys Arg Ala Ala Asp His Leu Glu Ala
 625 630 635 640
 Leu Ala Ala Ile Glu Asp Phe Phe Leu Glu His Glu Thr Leu Val Pro
 645 650 655
 Ser Leu Ala Lys Val Leu Met Ala Phe Tyr Gln Leu Glu Ile Leu Ala
 660 665 670
 Glu Glu Thr Ile Leu Ser Trp Phe Ser Gln Arg Asp Ile Thr Asp Lys
 675 680 685
 Gly Gln Gln Leu Arg Lys Asn Gln Gln Leu Gln Arg Phe Ile Gln Trp
 690 695 700

Leu Arg Glu Ala Glu Glu Glu Ser Ser Asp Asp Asp
 705 710 715

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 <212> PRT
 <213> Arabidopsis thaliana

<400> 40
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Ser Phe Ala Thr Lys Phe Arg Pro Val Thr Leu Glu Arg Pro Lys Val
 35 40 45

Leu Leu Pro Ile Val Asn Val Pro Met Ile Asp Tyr Thr Leu Ala Trp
 50 55 60

Leu Glu Ser Ala Gly Ile Glu Glu Val Phe Val Phe Cys Cys Ala His
 65 70 75 80

Ser Met Gln Val Ile Glu Tyr Leu Glu Lys Ser Glu Trp Tyr Ser His
 85 90 95

Pro Asn Leu Leu Val Arg Thr Ile Glu Ser His Lys Ser Ile Ser Ala
 100 105 110

Gly Asp Ala Leu Arg Tyr Met Tyr Glu Gln Gln Thr Glu Thr Ser Gln
 115 120 125

Ile Gln Gly Asp Phe Val Leu Val Ser Gly Asp Thr Val Ser Asn Met
 130 135 140

Pro Leu Ala Asp Leu Ile Gln Glu His Arg Glu Arg Lys Lys Lys Asp
 145 150 155 160

Glu Lys Ala Ile Met Thr Met Val Ile Lys Gln Ser Lys Ser Ser Pro
 165 170 175

Leu Thr His Gln Ser Arg Leu Gly Thr Asp Gln Leu Phe Ile Ala Val
 180 185 190

Asp Pro Leu Thr Lys Gln Leu Leu His Tyr Glu Glu Asp Lys Ile Asp
 195 200 205

His Pro Ser Gly Ser Val Cys Leu Glu Lys Ser Leu Leu Asp Thr Asn
 210 215 220

Pro Ser Val Leu Val Cys Asn Asp Met Gln Asp Cys Tyr Ile Asp Ile
 225 230 235 240

Cys Ser Pro Glu Val Leu Ser Leu Phe Glu Asp Asn Phe Asp Tyr Gln

245								250				255			
His	Leu	Arg	Arg	His	Phe	Val	Lys	Gly	Val	Leu	Val	Asp	Asp	Ile	Met
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Gly	Tyr	Lys	Ile	Phe	Thr	His	Glu	Ile	His	Ser	Ser	Tyr	Ala	Gly	Arg
		275					280					285			
Ile	Asp	Asn	Phe	Arg	Ser	Tyr	Asp	Thr	Val	Ser	Lys	Asp	Ile	Ile	Gln
	290					295					300				
Arg	Trp	Thr	Tyr	Pro	Tyr	Val	Pro	Asp	Ile	Asn	Phe	Ser	Gly	Asn	Arg
305					310					315					320
Pro	Leu	Lys	Leu	Gly	Arg	Gln	Gly	Ile	Tyr	Lys	Ala	Ser	Asp	Val	Val
				325					330					335	
Gln	Ser	Arg	Ser	Ala	Asp	Val	Gly	Ala	Ser	Thr	Val	Ile	Gly	Tyr	Gly
			340					345					350		
Thr	Lys	Ile	Gly	His	Gly	Asp	Lys	Ile	Met	Asn	Ser	Val	Ile	Gly	Asn
	355						360					365			
Gly	Cys	Ser	Ile	Gly	Ser	Asn	Val	Val	Ile	Glu	Gly	Ser	Tyr	Ile	Trp
	370					375					380				
Asn	Asn	Val	Thr	Ile	Glu	Asp	Gly	Cys	Glu	Ile	Arg	Asn	Ala	Ile	Val
385					390					395					400
Cys	Asp	Gly	Val	Lys	Ile	Arg	Ala	Gly	Ala	Val	Leu	Gln	Pro	Gly	Val
				405					410					415	
Val	Leu	Ser	Phe	Asn	Val	Val	Val	Gly	Arg	Asp	Phe	Val	Val	Pro	Ala
			420					425					430		
Tyr	Ser	Lys	Val	Ser	Leu	Leu	Gln	Gln	Pro	Thr	Thr	Glu	Asp	Ser	Asp
		435					440					445			
Glu	Glu	Leu	Glu	Tyr	Ala	Asp	Ser	Ser	Ser	Gly	Thr	Ala	Asp	His	Leu
	450					455					460				
Ser	Gly	Leu	Asn	Leu	Gln	Met	Glu	Ser	Lys	Ala	Ser	Glu	Leu	Gly	Pro
465				470						475					480
Asp	Gly	Ala	Gly	Tyr	Ile	Trp	Glu	Val	Cys	Glu	Gly	Ala	His	Asp	Glu
				485					490					495	
Glu	Trp	Lys	His	Ser	Val	Ala	Pro	Ile	Pro	Lys	Asp	Lys	Leu	Ser	Glu
			500					505					510		
Ile	Thr	Gln	Ala	Ile	Asp	Asp	Asp	Asp	Thr	Asp	Asp	Glu	Ser	Val	Val
		515					520					525			
Pro	Thr	Ser	Gly	Glu	Leu	Lys	Ser	Asp	Ala	Asp	Ser	Ile	Asn	Thr	Asp
	530					535					540				
Val	Asn	Asp	Pro	Asn	Asp	Asp	Tyr	Tyr	Tyr	Phe	Glu	Lys	Glu	Val	Glu

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Gly Thr Val Leu Arg Ala Val Glu Glu Asn Ile Lys Val Asp Leu Val						
	565			570		575
Thr Met Glu Ile Asn Gly Leu Arg Leu Ser Phe Asn Met Glu Ser Ala						
	580			585		590
Asp Cys Ala Gly Ala Thr Phe Phe Ser Met Ile Lys Leu Ala Leu Asp						
	595			600		605
Thr Pro His Asn Ser Gly Ser Glu Leu Tyr Lys Asn Ala Ala Ser Ile						
	610			615		620
Ile Thr Lys Trp Lys Asp Leu Leu Gly Phe Tyr Ala Lys Lys Ile Asp						
	625			630		640
Glu Gln Ile Glu Val Ile Met Lys Phe Glu Glu Met Cys Gln Glu Ser						
	645			650		655
His Lys Glu Leu Gly Pro Leu Phe Thr Gln Ile Leu His Leu Leu Tyr						
	660			665		670
Asp Lys Asp Val Leu Gln Glu Asp Ala Ile Leu Arg Trp Glu Glu Glu						
	675			680		685
Lys Ala Gly Ala Asp Glu Ala Asp Lys Val Tyr Leu Lys Gln Cys Asp						
	690			695		700
Thr Phe Ile Gln Trp Leu Lys Glu Ala Ser Glu Glu Glu Asp Glu Asp						
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Asp Glu Asp Glu Glu Glu Glu Glu Asp Asn						
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 <211> 676
 <212> PRT
 <213> Arabidopsis thaliana

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35 40 45
Leu Leu Pro Leu Val Asn Ile Pro Met Ile Asp Tyr Thr Leu Ala Trp
50 55 60
Leu Glu Ser Ala Gly Ile Glu Glu Val Phe Val Phe Cys Ser Met Gln
65 70 75 80

Val	Ile	Asp	Tyr	Leu	Asn	Asn	Ser	Asp	Trp	Tyr	Ser	His	Lys	Asp	Phe	85	90	95
Thr	Val	Lys	Thr	Ile	Glu	Ser	Pro	Gln	Asn	Ser	Thr	Ser	Ala	Gly	Asp	100	105	110
Ala	Leu	Arg	Tyr	Ile	Tyr	Glu	Gln	Gln	Ile	Glu	Thr	Ser	Gln	Ile	Gln	115	120	125
Gly	Asp	Phe	Val	Leu	Val	Asn	Gly	Cys	Ile	Val	Ser	Asn	Met	Pro	Leu	130	135	140
Thr	Gln	Leu	Ile	Gln	Glu	His	Arg	Asp	Arg	Lys	Lys	Lys	Asp	Glu	Lys	145	150	155
Ala	Ile	Met	Thr	Met	Val	Ile	Arg	Gln	Ser	Leu	Ile	Thr	Asp	His	Gln	165	170	175
Leu	Phe	Ile	Ala	Val	Asn	Pro	Leu	Thr	Lys	Gln	Leu	Leu	Tyr	Tyr	Asp	180	185	190
Glu	Asp	Asn	Ile	Cys	Phe	Asp	Lys	Ser	Leu	Leu	Asp	Arg	Asn	Pro	Ser	195	200	205
Val	Leu	Leu	Cys	Ser	Asp	Met	Gln	Asp	Cys	Tyr	Ile	Asp	Ile	Cys	Ser	210	215	220
Leu	Glu	Val	Leu	Ser	Leu	Phe	Val	Asp	Asn	Phe	Asp	Tyr	Gln	His	Met	225	230	235
Arg	Cys	Asp	Phe	Val	Glu	Gly	Val	Leu	Ala	Asp	Asp	Ile	Ile	Gly	Tyr	245	250	255
Lys	Ile	Phe	Thr	His	Glu	Ile	Ser	Ser	Cys	Tyr	Ala	Ser	Arg	Ile	Glu	260	265	270
Asn	Phe	Arg	Ser	Tyr	Asp	Met	Val	Ser	Lys	Asp	Ile	Ile	Gln	Arg	Arg	275	280	285
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Lys	Leu	Glu	Arg	Gln	Gly	Ile	Tyr	Lys	Ala	Ser	Asp	Ala	Thr	Gln	Leu	305	310	315
Pro	Ser	Ala	His	Val	Gly	Ala	Ser	Tyr	Val	Ile	Gly	His	Ala	Thr	Asn	325	330	335
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Ser	Ile	Gly	Ser	Asn	Val	Val	Ile	Gln	Gly	Ser	Tyr	Ile	Trp	Asn	Asn	355	360	365
Val	Thr	Val	Glu	Asp	Gly	Cys	Glu	Ile	Arg	Asn	Ala	Ile	Val	Cys	Asp	370	375	380

Glu Val Lys Val Cys Ala Gly Ala Ile Val Lys Pro Gly Val Val Leu
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 Ser Phe Lys Val Val Val Gly Arg Asp Phe Val Val Pro Ala Tyr Ser
 405 410 415
 Gln Val Ser Leu Leu Arg Gln Pro Met Glu Glu Asp Ser Asp Glu Glu
 420 425 430
 Asn Leu Leu Ser Gly Val Asp Leu Gln Met Glu Ser Lys Leu Gly Leu
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 Asp Gly Ala Gly Tyr Ile Trp Arg Gln Ala Cys Glu Asp Glu Trp Lys
 450 455 460
 His Ser Val Pro Pro Ile Pro Lys Asp Lys Leu Ala Glu Ile Ile Lys
 465 470 475 480
 Ala Ile Asp Asp Asp Asp Thr Asp Asp Glu Ser Val Val Thr Thr Ser
 485 490 495
 Gly Asp Ala Asn Thr Ser Ile Asn Asn Asp Leu Phe Asp Phe Glu Arg
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 Glu Val Asp Gly Thr Phe Leu Arg Ala Val Glu Glu Asn Ile Val Ala
 515 520 525
 Asp Leu Ala Val Leu Glu Ile Asn Ser Leu Arg Leu Ser Tyr Asn Met
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 Glu Ser Ala His Cys Ala Gly Ala Ile Phe Tyr Ser Met Met Lys Leu
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 Ala Val Ser Thr Pro His Ser Ser Ile Asn Asp Leu Tyr Arg Asn Ala
 565 570 575
 Ser Ser Ile Ile Thr Arg Trp Lys Gly Leu Leu Gly Phe Tyr Val Lys
 580 585 590
 Lys Ser Asp Glu Gln Ile Glu Val Ile Ser Arg Leu Glu Glu Met Cys
 595 600 605
 Glu Glu Ser Ala His Glu Leu Gly Thr Leu Phe Ala His Ile Leu Arg
 610 615 620
 Tyr Met Tyr Glu Glu Glu Asn Asp Leu Leu Gln Glu Val Ala Ile Leu
 625 630 635 640
 Arg Trp Ser Asp Glu Lys Ala Gly Ala Asp Glu Ser Asp Lys Val Tyr
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 660 665 670
 Asp Glu Asp Gly
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 <211> 2004
 <212> DNA
 <213> Homo sapiens

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 aaaaaaaaaa aaaaaaaaaa aaaa 2004

<210> 43
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 43
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 Gln Thr Leu Leu Gln Gln Met Gln Asp Lys Phe Gln Thr Met Ser Asp
 20 25 30
 Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu
 35 40 45

Glu Lys Asn Ile Ala Asp Leu Met Thr Gln Ala Gly Val Glu Glu Leu
 50 55 60

Glu Ser Glu Asn Lys Ile Pro Ala Thr Gln Lys Ser
 65 70 75

<210> 44
 <211> 2004
 <212> DNA
 <213> Homo sapiens

<400> 44
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<210> 45
 <211> 76
 <212> PRT
 <213> Homo sapiens

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Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu	35	40	45
Glu Lys Asn Ile Ala Asp Leu Met Thr Gln Ala Gly Val Glu Glu Leu	50	55	60
Glu Ser Glu Asn Lys Ile Pro Ala Thr Gln Lys Ser	65	70	75

<210> 46
 <211> 76
 <212> PRT
 <213> Mus musculus

<400> 46
Met Ala Glu Thr Asp Pro Lys Thr Met Gln Asp Ile Thr Leu Val Val
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Glu Thr Leu Leu Gln Gln Met Gln Asp Lys Phe Gln Ile Met Ser Asp
20 25 30
Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu
35 40 45
Glu Lys Asn Ile Ala Asp Leu Met Thr Gln Ala Gly Val Glu Glu Leu
50 55 60
Asp Pro Glu Asn Lys Ile Pro Thr Ala Gln Lys Ser
65 70 75

<210> 47
 <211> 86
 <212> PRT
 <213> Drosophila melanogaster

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Met Thr Asp Leu Arg Asn Glu Met Asp Ser Asp Leu Asp Gln Asn Tyr
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20 25 30
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35 40 45
Ser Asp Gln Ile Ile Thr Arg Ile Asp Asp Met Gly Asn Arg Ile Asp
50 55 60
Asp Leu Glu Lys Ser Ile Ala Asp Leu Met Asn Gln Ala Gly Ile Glu
65 70 75 80

Gly Gln Gly Pro Glu Lys
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<210> 48
<211> 80
<212> PRT
<213> *Caenorhabditis elegans*

<400> 48
Met Ser Asp Glu Lys Ser Thr Thr Pro Thr Ala Gln Leu Asp Ala Pro
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20 25 30
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35 40 45
Arg Ile Asp Asp Met Thr Thr Arg Ile Asp Asp Leu Glu Lys Asn Ile
50 55 60
Asn Asp Leu Leu Gln Ser Asn Gln Val Glu His Pro Pro Ser Ala Gln
65 70 75 80

<210> 49
<211> 99
<212> PRT
<213> *Oryza sativa*

<400> 49
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35 40 45
Glu Asn Ile Ile Ser Lys Ile Asp Glu Met Gly Ala Arg Ile Asp Glu
50 55 60
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Ser Ala Glu

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 <211> 4204
 <212> DNA
 <213> Homo sapiens

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<210> 51
 <211> 90
 <212> PRT
 <213> Homo sapiens

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<400> 51
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Met Lys Leu Ala Ile Asp Ile Asp Pro Val Ile Met Leu Leu Phe Phe
      35             40            45

Leu Leu Leu Leu Ser Val Cys Ile Ser Ser Ser Leu Gly Trp Met Ser
      50             55            60

Ile Gly Gln His Gly Lys Thr Met Phe Ile Asp Leu Gln Phe Leu Gly
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Ala Leu Lys Lys Val Met His Arg Tyr Ile
      85             90

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<210> 52
 <211> 3111
 <212> DNA
 <213> Homo sapiens

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cacctccgca tcccagccca taggttggtt ctcagcgcag tgtctgatta ttttgctgca 180

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gataccattg	aaagtttgc	ggctgcagct	tgtcttctgc	agctgactca	ggtcattgat	360
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<210> 53
 <211> 569
 <212> PRT
 <213> Homo sapiens

<400> 53

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Cys	Asp	Val	Leu	Leu	Ile	Ala	Gly	His	Leu	Arg	Ile	Pro	Ala	His	Arg	35	40	45	
Leu	Val	Leu	Ser	Ala	Val	Ser	Asp	Tyr	Phe	Ala	Ala	Met	Phe	Thr	Asn	50	55	60	
Asp	Val	Leu	Glu	Ala	Lys	Gln	Glu	Glu	Val	Arg	Met	Glu	Gly	Val	Asp	65	70	75	80
Pro	Asn	Ala	Leu	Asn	Ser	Leu	Val	Gln	Tyr	Ala	Tyr	Thr	Gly	Val	Leu	85	90	95	
Gln	Leu	Lys	Glu	Asp	Thr	Ile	Glu	Ser	Leu	Leu	Ala	Ala	Ala	Cys	Leu	100	105	110	
Leu	Gln	Leu	Thr	Gln	Val	Ile	Asp	Val	Cys	Ser	Asn	Phe	Leu	Ile	Lys	115	120	125	
Gln	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	Arg	Ser	Phe	Gly	Asp	Ala	130	135	140	
Gln	Gly	Cys	Thr	Glu	Leu	Leu	Asn	Val	Ala	His	Lys	Tyr	Thr	Met	Glu	145	150	155	160
His	Phe	Ile	Glu	Val	Ile	Lys	Asn	Gln	Glu	Phe	Leu	Leu	Leu	Pro	Ala	165	170	175	
Asn	Glu	Ile	Ser	Lys	Leu	Leu	Cys	Ser	Asp	Asp	Ile	Asn	Val	Pro	Asp	180	185	190	
Glu	Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Gln	Trp	Val	Gly	His	Asp	Val	195	200	205	
Gln	Asn	Arg	Gln	Gly	Glu	Leu	Gly	Met	Leu	Leu	Ser	Tyr	Ile	Arg	Leu	210	215	220	
Pro	Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser	Ser	Met	225	230	235	240
Phe	Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala	Met	Lys	245	250	255	
Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro	Arg	Thr	260	265	270	
Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Ala	Leu	Tyr	Ala	Val	Gly	Gly	Met	275	280	285	
Asp	Ala	Met	Lys	Gly	Thr	Thr	Thr	Ile	Glu	Lys	Tyr	Asp	Leu	Arg	Thr	290	295	300	

Asn Ser Trp Leu His Ile Gly Thr Met Asn Gly Arg Arg Leu Gln Phe
 305 310 315 320
 Gly Val Ala Val Ile Asp Asn Lys Leu Tyr Val Val Gly Gly Arg Asp
 325 330 335
 Gly Leu Lys Thr Leu Asn Thr Val Glu Cys Phe Asn Pro Val Gly Lys
 340 345 350
 Ile Trp Thr Val Met Pro Pro Met Ser Thr His Arg His Gly Leu Gly
 355 360 365
 Val Ala Thr Leu Glu Gly Pro Met Tyr Ala Val Gly Gly His Asp Gly
 370 375 380
 Trp Ser Tyr Leu Asn Thr Val Glu Arg Trp Asp Pro Glu Gly Arg Gln
 385 390 395 400
 Trp Asn Tyr Val Ala Ser Met Ser Thr Pro Arg Ser Thr Val Gly Val
 405 410 415
 Val Ala Leu Asn Asn Lys Leu Tyr Ala Ile Gly Gly Arg Asp Gly Ser
 420 425 430
 Ser Cys Leu Lys Ser Met Glu Tyr Phe Asp Pro His Thr Asn Lys Trp
 435 440 445
 Ser Leu Cys Ala Pro Met Ser Lys Arg Arg Gly Gly Val Gly Val Ala
 450 455 460
 Thr Tyr Asn Gly Phe Leu Tyr Val Val Gly Gly His Asp Ala Pro Ala
 465 470 475 480
 Ser Asn His Cys Ser Arg Leu Ser Asp Cys Val Glu Arg Tyr Asp Pro
 485 490 495
 Lys Gly Asp Ser Trp Ser Thr Val Ala Pro Leu Ser Val Pro Arg Asp
 500 505 510
 Ala Val Ala Val Cys Pro Leu Gly Asp Lys Leu Tyr Val Val Gly Gly
 515 520 525
 Tyr Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp Ala Gln
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<210> 54
 <211> 3111
 <212> DNA
 <213> Homo sapiens

<400> 54

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<210> 55

<211> 728

<212> PRT
 <213> Homo sapiens

<400> 55

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Ser	His	Pro	Phe	Gln	Gly	Ser	Thr	Asn	Thr	Gly	Ser	Cys	Leu	Gln	Gln	35	40	45	
Glu	Gly	Tyr	Glu	His	Arg	Gly	Thr	Pro	Val	Gln	Gly	Arg	Leu	Lys	Ser	50	55	60	
His	Ser	Arg	Asp	Arg	Asn	Gly	Leu	Lys	Lys	Ser	Asn	Ser	Pro	Val	His	65	70	75	80
His	Asn	Ile	Leu	Ala	Pro	Val	Pro	Gly	Pro	Ala	Pro	Ala	His	Gln	Arg	85	90	95	
Ala	Val	Gln	Asn	Leu	Gln	Gln	His	Asn	Leu	Ile	Val	His	Phe	Gln	Ala	100	105	110	
Asn	Glu	Asp	Thr	Pro	Lys	Ser	Val	Pro	Glu	Lys	Asn	Leu	Phe	Lys	Glu	115	120	125	
Ala	Cys	Glu	Lys	Arg	Ala	Gln	Asp	Leu	Glu	Met	Met	Ala	Asp	Asp	Asn	130	135	140	
Ile	Glu	Asp	Ser	Thr	Ala	Arg	Leu	Asp	Thr	Gln	His	Ser	Glu	Asp	Met	145	150	155	160
Asn	Ala	Thr	Arg	Ser	Glu	Glu	Gln	Phe	His	Val	Ile	Asn	His	Ala	Glu	165	170	175	
Gln	Thr	Leu	Arg	Lys	Met	Glu	Asn	Tyr	Leu	Lys	Glu	Lys	Gln	Leu	Cys	180	185	190	
Asp	Val	Leu	Leu	Ile	Ala	Gly	His	Leu	Arg	Ile	Pro	Ala	His	Arg	Leu	195	200	205	
Val	Leu	Ser	Ala	Val	Ser	Asp	Tyr	Phe	Ala	Ala	Met	Phe	Thr	Asn	Asp	210	215	220	
Val	Leu	Glu	Ala	Lys	Gln	Glu	Glu	Val	Arg	Met	Glu	Gly	Val	Asp	Pro	225	230	235	240
Asn	Ala	Leu	Asn	Ser	Leu	Val	Gln	Tyr	Ala	Tyr	Thr	Gly	Val	Leu	Gln	245	250	255	
Leu	Lys	Glu	Asp	Thr	Ile	Glu	Ser	Leu	Leu	Ala	Ala	Ala	Cys	Leu	Leu	260	265	270	
Gln	Leu	Thr	Gln	Val	Ile	Asp	Val	Cys	Ser	Asn	Phe	Leu	Ile	Lys	Gln	275	280	285	

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Gly	Cys	Thr	Glu	Leu	Leu	Asn	Val	Ala	His	Lys	Tyr	Thr	Met	Glu	His	305	310	315	320
Phe	Ile	Glu	Val	Ile	Lys	Asn	Gln	Glu	Phe	Leu	Leu	Leu	Pro	Ala	Asn	325	330	335	
Glu	Ile	Ser	Lys	Leu	Leu	Cys	Ser	Asp	Asp	Ile	Asn	Val	Pro	Asp	Glu	340	345	350	
Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Gln	Trp	Val	Gly	His	Asp	Val	Gln	355	360	365	
Asn	Arg	Gln	Gly	Glu	Leu	Gly	Met	Leu	Leu	Ser	Tyr	Ile	Arg	Leu	Pro	370	375	380	
Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser	Ser	Met	Phe	385	390	395	400
Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala	Met	Lys	Tyr	405	410	415	
His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro	Arg	Thr	Lys	420	425	430	
Pro	Arg	Lys	Ser	Thr	Val	Gly	Ala	Leu	Tyr	Ala	Val	Gly	Gly	Met	Asp	435	440	445	
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Ser	Trp	Leu	His	Ile	Gly	Thr	Met	Asn	Gly	Arg	Arg	Leu	Gln	Phe	Gly	465	470	475	480
Val	Ala	Val	Ile	Asp	Asn	Lys	Leu	Tyr	Val	Val	Gly	Gly	Arg	Asp	Gly	485	490	495	
Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Phe	Asn	Pro	Val	Gly	Lys	Ile	500	505	510	
Trp	Thr	Val	Met	Pro	Pro	Met	Ser	Thr	His	Arg	His	Gly	Leu	Gly	Val	515	520	525	
Ala	Thr	Leu	Glu	Gly	Pro	Met	Tyr	Ala	Val	Gly	Gly	His	Asp	Gly	Trp	530	535	540	
Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Glu	Gly	Arg	Gln	Trp	545	550	555	560
Asn	Tyr	Val	Ala	Ser	Met	Ser	Thr	Pro	Arg	Ser	Thr	Val	Gly	Val	Val	565	570	575	
Ala	Leu	Asn	Asn	Lys	Leu	Tyr	Ala	Ile	Gly	Gly	Arg	Asp	Gly	Ser	Ser	580	585	590	

Cys Leu Lys Ser Met Glu Tyr Phe Asp Pro His Thr Asn Lys Trp Ser
 595 600 605
 Leu Cys Ala Pro Met Ser Lys Arg Arg Gly Gly Val Gly Val Ala Thr
 610 615 620
 Tyr Asn Gly Phe Leu Tyr Val Val Gly Gly His Asp Ala Pro Ala Ser
 625 630 635 640
 Asn His Cys Ser Arg Leu Ser Asp Cys Val Glu Arg Tyr Asp Pro Lys
 645 650 655
 Gly Asp Ser Trp Ser Thr Val Ala Pro Leu Ser Val Pro Arg Asp Ala
 660 665 670
 Val Ala Val Cys Pro Leu Gly Asp Lys Leu Tyr Val Val Gly Gly Tyr
 675 680 685
 Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp Ala Gln Arg
 690 695 700
 Asn Glu Trp Lys Glu Glu Val Pro Val Asn Ile Gly Arg Ala Gly Ala
 705 710 715 720
 Cys Val Val Val Val Lys Leu Pro
 725

<210> 56
 <211> 569
 <212> PRT
 <213> Homo sapiens

<400> 56
 Met Asn Ala Thr Arg Ser Glu Glu Gln Phe His Val Ile Asn His Ala
 1 5 10 15
 Glu Gln Thr Leu Arg Lys Met Glu Asn Tyr Leu Lys Glu Lys Gln Leu
 20 25 30
 Cys Asp Val Leu Leu Ile Ala Gly His Leu Arg Ile Pro Ala His Arg
 35 40 45
 Leu Val Leu Ser Ala Val Ser Asp Tyr Phe Ala Ala Met Phe Thr Asn
 50 55 60
 Asp Val Leu Glu Ala Lys Gln Glu Glu Val Arg Met Glu Gly Val Asp
 65 70 75 80
 Pro Asn Ala Leu Asn Ser Leu Val Gln Tyr Ala Tyr Thr Gly Val Leu
 85 90 95
 Gln Leu Lys Glu Asp Thr Ile Glu Ser Leu Leu Ala Ala Ala Cys Leu
 100 105 110
 Leu Gln Leu Thr Gln Val Ile Asp Val Cys Ser Asn Phe Leu Ile Lys

115					120					125					
Gln	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	Arg	Ser	Phe	Gly	Asp	Ala
130					135					140					
Gln	Gly	Cys	Thr	Glu	Leu	Leu	Asn	Val	Ala	His	Lys	Tyr	Thr	Met	Glu
145					150					155					160
His	Phe	Ile	Glu	Val	Ile	Lys	Asn	Gln	Glu	Phe	Leu	Leu	Leu	Pro	Ala
			165						170					175	
Asn	Glu	Ile	Ser	Lys	Leu	Leu	Cys	Ser	Asp	Asp	Ile	Asn	Val	Pro	Asp
			180					185					190		
Glu	Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Gln	Trp	Val	Gly	His	Asp	Val
		195					200					205			
Gln	Asn	Arg	Gln	Gly	Glu	Leu	Gly	Met	Leu	Leu	Ser	Tyr	Ile	Arg	Leu
	210					215					220				
Pro	Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser	Ser	Met
225					230					235					240
Phe	Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala	Met	Lys
			245						250					255	
Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro	Arg	Thr
		260						265					270		
Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Ala	Leu	Tyr	Ala	Val	Gly	Gly	Met
	275						280					285			
Asp	Ala	Met	Lys	Gly	Thr	Thr	Thr	Ile	Glu	Lys	Tyr	Asp	Leu	Arg	Thr
	290						295					300			
Asn	Ser	Trp	Leu	His	Ile	Gly	Thr	Met	Asn	Gly	Arg	Arg	Leu	Gln	Phe
305					310					315					320
Gly	Val	Ala	Val	Ile	Asp	Asn	Lys	Leu	Tyr	Val	Val	Gly	Gly	Arg	Asp
			325						330					335	
Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Phe	Asn	Pro	Val	Gly	Lys
		340						345					350		
Ile	Trp	Thr	Val	Met	Pro	Pro	Met	Ser	Thr	His	Arg	His	Gly	Leu	Gly
	355						360					365			
Val	Ala	Thr	Leu	Glu	Gly	Pro	Met	Tyr	Ala	Val	Gly	Gly	His	Asp	Gly
	370					375					380				
Trp	Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Glu	Gly	Arg	Gln
385					390					395					400
Trp	Asn	Tyr	Val	Ala	Ser	Met	Ser	Thr	Pro	Arg	Ser	Thr	Val	Gly	Val
			405						410					415	
Val	Ala	Leu	Asn	Asn	Lys	Leu	Tyr	Ala	Ile	Gly	Gly	Arg	Asp	Gly	Ser

Gln	Gln	Pro	Ala	Arg	Thr	Leu	Phe	Tyr	Val	Glu	Ser	Leu	Glu	Glu	Glu	115	120	125	
Val	Val	Pro	Gly	Met	Asp	Phe	Pro	Gly	Pro	His	Glu	Lys	Gly	Leu	Val	130	135	140	
Leu	Gln	Glu	Leu	Lys	Val	Glu	Pro	Asp	Asn	Ser	Ser	Gln	Ala	Thr	Gly	145	150	155	160
Glu	Gly	Cys	Gly	His	Arg	Leu	Ser	Ser	Thr	Gly	His	Ser	Met	Thr	Pro	165	170	175	
Gln	Ser	Asp	Leu	Asp	Ser	Ser	Ser	Ser	Glu	Glu	Phe	Tyr	Gln	Ala	Val	180	185	190	
His	His	Ala	Glu	Gln	Thr	Phe	Arg	Lys	Met	Glu	Ser	Tyr	Leu	Lys	Gln	195	200	205	
Gln	Gln	Leu	Cys	Asp	Val	Ile	Leu	Ile	Val	Gly	Asn	Arg	Lys	Ile	Pro	210	215	220	
Ala	His	Arg	Leu	Val	Leu	Ser	Ser	Val	Ser	Asp	Tyr	Phe	Ala	Ala	Met	225	230	235	240
Phe	Thr	Ser	Asp	Val	Cys	Glu	Ala	Lys	Gln	Glu	Glu	Ile	Lys	Met	Glu	245	250	255	
Gly	Ile	Asp	Pro	Asn	Ala	Leu	Trp	Asp	Leu	Val	Gln	Phe	Ala	Tyr	Thr	260	265	270	
Gly	Cys	Leu	Glu	Leu	Lys	Glu	Asp	Thr	Ile	Glu	Asn	Leu	Leu	Ala	Ala	275	280	285	
Ala	Cys	Leu	Leu	Gln	Leu	Pro	Gln	Val	Val	Glu	Val	Cys	Cys	His	Phe	290	295	300	
Leu	Met	Lys	Leu	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	Arg	Ala	Phe	305	310	315	320
Ala	Asp	Ala	Gln	Gly	Cys	Ile	Glu	Leu	Met	Lys	Val	Ala	His	Ser	Tyr	325	330	335	
Thr	Met	Glu	Asn	Ile	Met	Glu	Val	Ile	Arg	Asn	Gln	Glu	Phe	Leu	Leu	340	345	350	
Leu	Pro	Ala	Glu	Glu	Leu	His	Lys	Leu	Leu	Ala	Ser	Asp	Asp	Val	Asn	355	360	365	
Val	Pro	Asp	Glu	Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Met	Trp	Val	Lys	370	375	380	
Tyr	Asp	Met	Gln	Ser	Arg	Cys	Asn	Asp	Leu	Ser	Met	Leu	Leu	Ala	Phe	385	390	395	400
Ile	Arg	Leu	Pro	Leu	Leu	Pro	Pro	Gln	Ile	Leu	Ala	Asp	Leu	Glu	Asn	405	410	415	

His	Ala	Leu	Phe	Lys	Asn	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Ile	Leu	Glu
			420				425						430		
Ala	Met	Lys	Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Thr	Leu	Met	Gln	Ser
			435				440						445		
Pro	Arg	Thr	Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Thr	Leu	Tyr	Ala	Val
			450				455						460		
Gly	Gly	Met	Asp	Asn	Asn	Lys	Gly	Ala	Thr	Thr	Ile	Glu	Lys	Tyr	Asp
			465				470						480		
Leu	Arg	Thr	Asn	Leu	Trp	Ile	Gln	Ala	Gly	Met	Met	Asn	Gly	Arg	Arg
			485				490						495		
Leu	Gln	Phe	Gly	Val	Ala	Val	Ile	Asp	Asp	Lys	Leu	Phe	Val	Ile	Gly
			500				505						510		
Gly	Arg	Asp	Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Tyr	Asn	Pro
			515				520						525		
Lys	Thr	Lys	Thr	Trp	Thr	Val	Leu	Pro	Pro	Met	Ser	Thr	His	Arg	His
			530				535						540		
Gly	Leu	Gly	Val	Thr	Val	Leu	Glu	Gly	Pro	Ile	Tyr	Ala	Val	Gly	Gly
			545				550						560		
His	Asp	Gly	Trp	Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Gln
			565				570						575		
Ser	Gln	Gln	Trp	Thr	Phe	Val	Ala	Ser	Met	Ser	Ile	Ala	Arg	Ser	Thr
			580				585						590		
Val	Gly	Val	Ala	Ala	Leu	Asn	Gly	Lys	Leu	Tyr	Ser	Val	Gly	Gly	Arg
			595				600						605		
Asp	Gly	Ser	Ser	Cys	Leu	Ser	Ser	Met	Glu	Tyr	Tyr	Asp	Pro	His	Thr
			610				615						620		
Asn	Lys	Trp	Asn	Met	Cys	Ala	Pro	Met	Cys	Lys	Arg	Arg	Gly	Gly	Val
			625				630						640		
Gly	Val	Ala	Thr	Cys	Asp	Gly	Phe	Leu	Tyr	Ala	Val	Gly	Gly	His	Asp
			645				650						655		
Ala	Pro	Ala	Ser	Asn	His	Cys	Ser	Arg	Leu	Leu	Asp	Tyr	Val	Glu	Arg
			660				665						670		
Tyr	Asp	Pro	Lys	Thr	Asp	Thr	Trp	Thr	Met	Val	Ala	Pro	Leu	Ser	Met
			675				680						685		
Pro	Arg	Asp	Ala	Val	Gly	Val	Cys	Leu	Leu	Gly	Asp	Arg	Leu	Tyr	Ala
			690				695						700		
Val	Gly	Gly	Tyr	Asp	Gly	Gln	Thr	Tyr	Leu	Asn	Thr	Met	Glu	Ser	Tyr
			705				710						720		

Asp Pro Gln Thr Asn Glu Trp Thr Gln Met Ala Ser Leu Asn Ile Gly
725 730 735

Arg Ala Gly Ala Cys Val Val Val Ile Lys Gln Pro
740 745

<210> 58
<211> 751
<212> PRT
<213> Mus musculus

<400> 58
Met Ser Gly Ser Gly Arg Lys Asp Phe Asp Val Lys His Ile Leu Arg
1 5 10 15

Leu Arg Trp Lys Leu Phe Ser His Pro Ser Pro Ala Ser Ser Ser Pro
20 25 30

Ala Gly Gly Ser Cys Leu Gln Gln Asp Ser Gly Gly Gly Ser Phe Glu
35 40 45

His Trp Gly Pro Ser Gln Ser Arg Leu Leu Lys Asn Gln Glu Lys Gly
50 55 60

Ser Val Ser Ala Phe Trp Lys Lys Pro Ser Ser Ser Ser Ser Ser
65 70 75 80

Ser Ser Ser Ser Ser Ser Ala Ser Ser Ser Pro Phe Asn Pro Leu Asn
85 90 95

Gly Thr Leu Leu Pro Val Ala Thr Arg Leu Gln Gln Gly Ala Pro Gly
100 105 110

Gln Gly Thr Gln Gln Pro Ala Arg Thr Leu Phe Tyr Val Glu Ser Leu
115 120 125

Glu Glu Glu Val Val Thr Gly Met Asp Phe Pro Gly Pro Gln Asp Lys
130 135 140

Gly Leu Ala Leu Lys Glu Leu Gln Ala Glu Pro Ala Ser Ser Ile Gln
145 150 155 160

Ala Thr Gly Glu Gly Cys Gly His Arg Leu Thr Ser Thr Asn His Ser
165 170 175

Leu Thr Pro Gln Ser Asp Leu Asp Ser Ser Ser Ser Glu Glu Phe Tyr
180 185 190

Gln Ala Val Arg His Ala Glu Gln Ser Phe Arg Lys Met Glu Asn Tyr
195 200 205

Leu Lys Gln Gln Gln Leu Cys Asp Val Ile Leu Ile Val Gly Asn Arg
210 215 220

Lys Ile Pro Ala His Arg Leu Val Leu Ser Ser Val Ser Asp Tyr Phe
225 230 235 240

Ala	Ala	Met	Phe	Thr	Ser	Asp	Val	Cys	Glu	Ala	Lys	Gln	Glu	Glu	Ile	245	250	255	
Lys	Met	Glu	Gly	Ile	Asp	Pro	Asn	Ala	Leu	Trp	Asp	Leu	Val	Gln	Phe	260	265	270	
Ala	Tyr	Thr	Gly	Cys	Leu	Glu	Leu	Lys	Glu	Asp	Thr	Ile	Glu	Asn	Leu	275	280	285	
Leu	Ala	Ala	Ala	Cys	Leu	Leu	Gln	Leu	Pro	Gln	Val	Val	Glu	Val	Cys	290	295	300	
Cys	His	Phe	Leu	Met	Lys	Leu	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	305	310	315	320
Arg	Ala	Phe	Ala	Asp	Ala	Gln	Gly	Cys	Ile	Glu	Leu	Met	Lys	Val	Ala	325	330	335	
His	Ser	Tyr	Thr	Met	Glu	Asn	Ile	Met	Glu	Val	Ile	Arg	Asn	Gln	Glu	340	345	350	
Phe	Leu	Leu	Leu	Pro	Ala	Glu	Glu	Leu	His	Lys	Leu	Leu	Ala	Ser	Asp	355	360	365	
Asp	Val	Asn	Val	Pro	Asp	Glu	Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Met	370	375	380	
Trp	Val	Lys	Tyr	Asp	Met	Gln	Arg	Arg	Cys	Ser	Asp	Leu	Ser	Met	Leu	385	390	395	400
Leu	Ala	Phe	Ile	Arg	Leu	Pro	Leu	Leu	Pro	Pro	Gln	Ile	Leu	Ala	Asp	405	410	415	
Leu	Glu	Asn	His	Ala	Leu	Phe	Lys	Asn	Asp	Leu	Glu	Cys	Gln	Lys	Leu	420	425	430	
Ile	Leu	Glu	Ala	Met	Lys	Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Thr	Leu	435	440	445	
Met	Gln	Ser	Pro	Arg	Thr	Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Thr	Leu	450	455	460	
Tyr	Ala	Val	Gly	Gly	Met	Asp	Asn	Asn	Lys	Gly	Ala	Thr	Thr	Ile	Glu	465	470	475	480
Lys	Tyr	Asp	Leu	Arg	Thr	Asn	Leu	Trp	Ile	Gln	Ala	Gly	Met	Met	Asn	485	490	495	
Gly	Arg	Arg	Leu	Gln	Phe	Gly	Val	Ala	Val	Ile	Asp	Asp	Lys	Leu	Phe	500	505	510	
Val	Ile	Gly	Gly	Arg	Asp	Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	515	520	525	
Tyr	Asn	Pro	Lys	Thr	Lys	Thr	Trp	Thr	Val	Leu	Pro	Pro	Met	Ser	Thr	530	535	540	

His Arg His Gly Leu Gly Val Thr Val Leu Glu Gly Pro Ile Tyr Ala
545 550 555 560

Val Gly Gly His Asp Gly Trp Ser Tyr Leu Asn Thr Val Glu Arg Trp
565 570 575

Asp Pro Gln Ser Gln Gln Trp Thr Tyr Val Ala Ser Met Ser Ile Ala
580 585 590

Arg Ser Thr Val Gly Val Ala Ala Leu Asn Gly Lys Leu Tyr Ser Val
595 600 605

Gly Gly Arg Asp Gly Ser Ser Cys Leu Ser Ser Met Glu Tyr Tyr Asp
610 615 620

Pro His Thr Asn Lys Trp Ser Met Cys Pro Pro Met Cys Lys Lys Arg
625 630 635 640

Gly Gly Val Gly Val Ala Thr Cys Asp Gly Phe Leu Tyr Ala Val Gly
645 650 655

Gly His Asp Ala Pro Ala Ser Asn His Cys Ser Arg Leu Leu Asp Tyr
660 665 670

Val Glu Arg Tyr Glu Pro Lys Thr Asp Thr Trp Thr Met Val Ala Pro
675 680 685

Leu Ser Met Pro Arg Asp Ala Val Gly Val Cys Leu Leu Gly Asp Arg
690 695 700

Leu Tyr Ala Val Gly Gly Tyr Asp Gly Gln Thr Tyr Leu Asn Thr Met
705 710 715 720

Glu Ser Tyr Asp Pro Gln Thr Asn Glu Trp Thr Gln Met Ala Ser Leu
725 730 735

Asn Ile Gly Arg Ala Gly Ala Cys Val Val Val Ile Lys Gln Pro
740 745 750

<210> 59
<211> 411
<212> PRT
<213> Homo sapiens

<400> 59
Met Glu His Phe Ile Glu Val Ile Lys Asn Gln Glu Phe Leu Leu Leu
1 5 10 15

Pro Ala Asn Glu Ile Ser Lys Leu Leu Cys Ser Asp Asp Ile Asn Val
20 25 30

Pro Asp Glu Glu Thr Ile Phe His Ala Leu Met Gln Trp Val Gly His
35 40 45

Asp Val Gln Asn Arg Gln Gly Glu Leu Gly Met Leu Leu Ser Tyr Ile

50	55	60
Arg Leu Pro Leu Leu Pro Pro Gln Leu Leu Ala Asp Leu Glu Thr Ser		
65	70	75 80
Ser Met Phe Thr Gly Asp Leu Glu Cys Gln Lys Leu Leu Met Glu Ala		
	85	90 95
Met Lys Tyr His Leu Leu Pro Glu Arg Arg Ser Met Met Gln Ser Pro		
	100	105 110
Arg Thr Lys Pro Arg Lys Ser Thr Val Gly Ala Leu Tyr Ala Val Gly		
	115	120 125
Gly Met Asp Ala Met Lys Gly Thr Thr Thr Ile Glu Lys Tyr Asp Leu		
	130	135 140
Arg Thr Asn Ser Trp Leu His Ile Gly Thr Met Asn Gly Arg Arg Leu		
	145	150 155 160
Gln Phe Gly Val Ala Val Ile Asp Asn Lys Leu Tyr Val Val Gly Gly		
	165	170 175
Arg Asp Gly Leu Lys Thr Leu Asn Thr Val Glu Cys Phe Asn Pro Val		
	180	185 190
Gly Lys Ile Trp Thr Val Met Pro Pro Met Ser Thr His Arg His Gly		
	195	200 205
Leu Gly Val Ala Thr Leu Glu Gly Pro Met Tyr Ala Val Gly Gly His		
	210	215 220
Asp Gly Trp Ser Tyr Leu Asn Thr Val Glu Arg Trp Asp Pro Glu Gly		
	225	230 235 240
Arg Gln Trp Asn Tyr Val Ala Ser Met Ser Thr Pro Arg Ser Thr Val		
	245	250 255
Gly Val Val Ala Leu Asn Asn Lys Leu Tyr Ala Ile Gly Gly Arg Asp		
	260	265 270
Gly Ser Ser Cys Leu Lys Ser Met Glu Tyr Phe Asp Pro His Thr Asn		
	275	280 285
Lys Trp Ser Leu Cys Ala Pro Met Ser Lys Arg Arg Gly Gly Val Gly		
	290	295 300
Val Ala Thr Tyr Asn Gly Phe Leu Tyr Val Val Gly Gly His Asp Ala		
	305	310 315 320
Pro Ala Ser Asn His Cys Ser Arg Leu Ser Asp Cys Val Glu Arg Tyr		
	325	330 335
Asp Pro Lys Gly Asp Ser Trp Ser Thr Val Ala Pro Leu Ser Val Pro		
	340	345 350
Arg Asp Ala Val Ala Val Cys Pro Leu Gly Asp Lys Leu Tyr Val Val		

355 360 365

Gly Gly Tyr Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp
 370 375 380

Ala Gln Arg Asn Glu Trp Lys Glu Glu Val Pro Val Asn Ile Gly Arg
 385 390 395 400

Ala Gly Ala Cys Val Val Val Val Lys Leu Pro
 405 410

<210> 60
 <211> 1339
 <212> DNA
 <213> Homo sapiens

<400> 60
 cacgggtccgc ccagaggctt cggagctgcc ggagccgggc ggggccttgg cgggcggccc 60
 cgggagtggc gggcgccggc tgggtggtcgg cgtggctgag gtgagaaact ggcgctgcgg 120
 ctgcctcgga gcacctgttg gtgccggagc ctgctgctgg tctgcgtgtt ggccgccttg 180
 tgcttcgctt ccctggccct ggtccgccgc taccttcacc acctcctgct gtgggtggag 240
 agccttgact cgctgctggg ggtcctgctc ttcgtcgtgg gcttcacgtt ggtctctttc 300
 ccctgcggct ggggctacat cgtgctcaac gtggccgctg gctacctgta cggcttcgtg 360
 ctgggcatgg gtctgatgat ggtgggcgtc ctcatcggca ccttcacgcg ccatgtggtc 420
 tgcaagcggc tcctcaccgc ctgggtggcc gccaggatcc agagcagcga gaagctgagc 480
 gcggttattc gcgtagtgga gggaggaagc ggctgaaag tgggtggcgt ggccagactg 540
 acaccatac cttttgggct tcagaatgca gtgttttcga ttactgatct ctcattaccc 600
 aactatctga tggcatcttc ggttggactg ctccctaccc agcttctgaa ttcttacttg 660
 ggtaccaccc tgcggacaat ggaagatgct attgcagaac agagtgttag tggatatattt 720
 gtttttttgt tacagattat tataagtata ggcctcatgt tttatgtagt tcatcgagct 780
 caagtggaat tgaatgcagc tattgtagct tgtgaaatgg aactgaaatc ttctctgggt 840
 aaaggcaatc aaccaaatac cagtggctct tcattctaca acaagaggac cctaacattt 900
 tctggaggtg gaatcaatgt tgtatgattc taatgagata cgtgattgtc aagagcctag 960
 tgtgctatct aagggtctagc agtcacttca ctagtgggca gagacaagtt ctaattgtat 1020
 tacagcacia acaaaactga ctagttttta aattgcacia tttttttttt ttttaagcaag 1080
 aatcattttc tgggtatgta agtgtaaatt tagatgcaaa tttggctgca cctctttatc 1140
 atgcctgtat tggcctatag gtctgcactt tagtggtttt taattgtttt atttctgtgt 1200
 atttacgaac agagaaataa ctcaaattt atttctgctt agtgtcttta tttataaagc 1260
 ccatgagtag tttgtatgca tctttcctac ttgtaaagat gagtaaaagt atgcagtttt 1320
 aaatttaaaa aaaaaaaaaa 1339

<210> 61
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 61
 Met Gly Leu Met Met Val Gly Val Leu Ile Gly Thr Phe Ile Ala His
 1 5 10 15

Val Val Cys Lys Arg Leu Leu Thr Ala Trp Val Ala Ala Arg Ile Gln
 20 25 30

Ser Glu Lys Leu Ser Ala Val Ile Arg Val Val Glu Gly Gly Ser
 35 40 45

Gly Leu Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly
 50 55 60

Leu Gln Asn Ala Val Phe Ser Ile Thr Asp Leu Ser Leu Pro Asn Tyr
 65 70 75 80

Leu Met Ala Ser Ser Val Gly Leu Leu Pro Thr Gln Leu Leu Asn Ser
 85 90 95

Tyr Leu Gly Thr Thr Leu Arg Thr Met Glu Asp Val Ile Ala Glu Gln
 100 105 110

Ser Val Ser Gly Tyr Phe Val Phe Cys Leu Gln Ile Ile Ile Ser Ile
 115 120 125

Gly Leu Met Phe Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala
 130 135 140

Ala Ile Val Ala Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly
 145 150 155 160

Asn Gln Pro Asn Thr Ser Gly Ser Ser Phe Tyr Asn Lys Arg Thr Leu
 165 170 175

Thr Phe Ser Gly Gly Gly Ile Asn Val Val
 180 185

<210> 62
 <211> 512
 <212> DNA
 <213> Homo sapiens

<400> 62
 gggtcctgct cttcgctcgt ggcttcacgt tggctctctt cccctgcggc tggggctaca 60
 tcgtgctcaa cgtggccgct ggctacctgt acggcttcgt gctgggcatg ggtctgatga 120
 tgggtggcgt cctcatcggc accttcacgt ccatgtgggt ctgcaagcgg ctcctcaccg 180
 cctgggtggc cgccaggatc cagagcagcg agaagctgag cgcggttatt cgcgtagtgg 240
 agggaggaag cggcctgaaa gtggtggcgc tggccagact gacacccata ccttttgggc 300
 ttcagaatgc agtgttttcg attattataa gtataggcct catgttttat gtagttcatt 360
 gagctcaagt ggaattgaat gcagctattg tagcttgtga aatggaactg aaatcttctc 420
 tgggttaaagg caatcaacca aataccagtg gctcttcatt ctacaacaag aggaccctaa 480
 cattttcttg aggtggaatc aatgttgat ga 512

<210> 63
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 63
 Met Gly Leu Met Met Val Gly Val Leu Ile Gly Thr Phe Ile Ala His
 1 5 10 15

Val Val Cys Lys Arg Leu Leu Thr Ala Trp Val Ala Ala Arg Ile Gln
 20 25 30

Ser Ser Glu Lys Leu Ser Ala Val Ile Arg Val Val Glu Gly Gly Ser
 35 40 45
 Gly Leu Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly
 50 55 60
 Leu Gln Asn Ala Val Phe Ser Ile Ile Ile Ser Ile Gly Leu Met Phe
 65 70 75 80
 Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala Ala Ile Val Ala
 85 90 95
 Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly Asn Gln Pro Asn
 100 105 110
 Thr Ser Gly Ser Ser Phe Tyr Asn Lys Arg Thr Leu Thr Phe Ser Gly
 115 120 125
 Gly Gly Ile Asn Val Val
 130

<210> 64
 <211> 690
 <212> DNA
 <213> Homo sapiens

<400> 64
 atgggcttca tcgtgggtctc tttccctgc ggctggggct acatcgtgct caacgtggcc 60
 gctggctacc tgtacggctt cgtgctgggc atgggtctga tgatgggtggg cgctcctcacc 120
 ggcaccttca tcgcccattg ggtctgcaag cggctcctca ccgctgggt ggccgccagg 180
 atccagagca gcgagaagct gagcgcgggt attcgcgtag tggagggagg aagcggcctg 240
 aaagtgggtg cgctggccag actgacaccc ataccttttg ggcttcagaa tgcgggtgttt 300
 tcgattactg atctctcatt acccaactat ctgatggcat cttcggttgg actgcttctc 360
 acccagcttc tgaattctta cttgggtacc accctgcgga caatggaaga tgtcattgca 420
 gaacagagtg ttagtggata ttttgttttt tgtttacaga ttattataag tataggcctc 480
 atgttttatg tagttcatcg agctcaagtg gaattgaatg cagctattgt agcttgtgaa 540
 atggaactga aatcttctct ggtaaaggc aatcaaccaa ataccagtgg ctcttcattc 600
 tacaacaaga ggaccctaac attttctgga ggtggaatca atgttgtatg attctaata 660
 gatacgtgat tgtaagagc ctagtgtga 690

<210> 65
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 65
 Met Gly Phe Ile Val Val Ser Phe Pro Cys Gly Trp Gly Tyr Ile Val
 1 5 10 15
 Leu Asn Val Ala Ala Gly Tyr Leu Tyr Gly Phe Val Leu Gly Met Gly
 20 25 30
 Leu Met Met Val Gly Val Leu Ile Gly Thr Phe Ile Ala His Val Val
 35 40 45

Cys Lys Arg Leu Leu Thr Ala Trp Val Ala Ala Arg Ile Gln Ser Ser
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 Glu Lys Leu Ser Ala Val Ile Arg Val Val Glu Gly Gly Ser Gly Leu
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 Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly Leu Gln
 85 90 95
 Asn Ala Val Phe Ser Ile Thr Asp Leu Ser Leu Pro Asn Tyr Leu Met
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 Ala Ser Ser Val Gly Leu Leu Pro Thr Gln Leu Leu Asn Ser Tyr Leu
 115 120 125
 Gly Thr Thr Leu Arg Thr Met Glu Asp Val Ile Ala Glu Gln Ser Val
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 Ser Gly Tyr Phe Val Phe Cys Leu Gln Ile Ile Ile Ser Ile Gly Leu
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 Met Phe Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala Ala Ile
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 Val Ala Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly Asn Gln
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 Ser Gly Gly Gly Ile Asn Val Val
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<210> 66
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 <212> PRT
 <213> Synechococcus sp.

<400> 66
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 Val Phe Leu Pro Gly Ser Ile Leu Thr Leu Gly Ala Gly Val Val Phe
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 Gly Val Ile Leu Gly Ser Ile Tyr Val Phe Ile Gly Ala Thr Leu Gly
 50 55 60
 Ala Thr Ala Ala Phe Leu Val Gly Arg Tyr Leu Ala Arg Gly Trp Val
 65 70 75 80
 Ala Lys Lys Ile Ala Gly Asn Gln Lys Phe Lys Ala Ile Asp Glu Ala

85								90				95			
Val	Gly	Lys	Glu	Gly	Leu	Lys	Ile	Val	Ile	Leu	Thr	Arg	Leu	Ser	Pro
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Val	Phe	Pro	Phe	Asn	Leu	Leu	Asn	Tyr	Ala	Tyr	Gly	Ile	Thr	Asn	Val
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Ser	Leu	Lys	Asp	Tyr	Val	Ile	Gly	Ser	Leu	Gly	Met	Ile	Pro	Gly	Thr
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145					150					155					160
Gly	Thr	Ala	Thr	Asn	Gln	Ala	Asn	Pro	Thr	Leu	Gln	Trp	Thr	Ile	Arg
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Glu

<210> 67
 <211> 444
 <212> PRT
 <213> *Drosophila melanogaster*

<400> 67

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Ala	Leu	Val	Phe	Ile	Gly	Trp	Ala	Thr	Arg	Asp	Tyr	Ala	Arg	Gln	Leu
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Thr	Ile	Arg	Ser	Cys	Arg	His	Arg	Ile	Pro	Val	Gln	Ser	Pro	Tyr	Ile
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Thr	His	Cys	Ser	Val	Cys	Phe	Leu	Tyr	Ser	Pro	Met	Leu	Arg	Phe	Leu	130	135	140
Arg	Asn	Phe	Lys	Tyr	Tyr	Ala	Trp	Gln	Glu	Val	Arg	Arg	Gly	Cys	Ser	145	150	155
Val	Val	Ala	Pro	Pro	Asp	Arg	Ser	Asp	Val	Leu	Leu	Val	Leu	Pro	Thr	165	170	175
Val	Trp	Pro	Ser	Glu	Leu	Thr	Lys	Arg	Ile	Arg	Pro	Leu	Ser	Val	Pro	180	185	190
Asp	Leu	Ile	Glu	Lys	Phe	Ser	Cys	Asp	Ala	Pro	Gly	Gly	Gln	Phe	Ala	195	200	205
Thr	Met	Ser	Glu	Tyr	Leu	Arg	Ser	Asp	Pro	Arg	Pro	Asp	Gly	Val	Leu	210	215	220
Leu	Pro	Asp	Glu	Ile	Asp	Leu	His	Arg	Lys	Met	Ser	Leu	Asp	Asp	Leu	225	230	235
Asn	Ser	Tyr	Met	His	Ala	Lys	Asp	Ala	Phe	Lys	Glu	Pro	His	Arg	Lys	245	250	255
Asn	Arg	Ile	Phe	Ser	His	Val	Leu	Val	Val	Ala	Gly	Ala	Asp	Ser	Ala	260	265	270
Arg	Ser	Tyr	Pro	Phe	Arg	Gln	Arg	Pro	Asp	Phe	Leu	Tyr	Leu	Cys	Asp	275	280	285
Cys	Leu	Arg	Pro	Gly	Ala	Ala	Leu	Val	Leu	Thr	Arg	Ser	Arg	Lys	Arg	290	295	300
Asn	Thr	Gly	Ala	Leu	Leu	Phe	Leu	Ser	Gln	Asp	Val	Asp	Ser	Gln	Leu	305	310	315
Ser	Thr	Ile	Phe	Ser	His	Met	His	Tyr	Val	Asp	Asp	Val	Leu	Pro	Leu	325	330	335
Ala	Met	Leu	Lys	Lys	Ser	Leu	Leu	Trp	Leu	Leu	Arg	Asp	His	Ser	Pro	340	345	350
Glu	Leu	Trp	His	Phe	Tyr	Asp	Pro	Ser	Ser	Pro	Val	Ser	Cys	Ile	Val	355	360	365
Gln	Glu	Val	Ala	Asn	Glu	Ala	Lys	Ile	Pro	Met	Gly	Asn	Pro	Arg	Tyr	370	375	380
Ile	Leu	Gln	Tyr	Thr	Arg	Thr	Val	Lys	Thr	Ser	Arg	Glu	Leu	Arg	Ala	385	390	395
Leu	Arg	Arg	Ala	Asn	Ala	Thr	Ala	Ala	Asp	Ser	Met	Ala	Glu	Val	Ile	405	410	415
Ala	Gln	His	His	Gln	Ile	Pro	Gln	Glu	Leu	Ala	Ala	Ser	Phe	Asp	Tyr	420	425	430

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 435 440

<210> 68
 <211> 269
 <212> PRT
 <213> Arabidopsis thaliana

<400> 68
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Phe Leu Leu Trp Ile Lys Glu Asp Leu Gly Pro Phe Gly Pro Leu Ala
 35 40 45

Leu Ala Leu Ala Tyr Ile Pro Leu Thr Ile Val Ala Val Pro Ala Ser
 50 55 60

Val Leu Thr Leu Gly Gly Gly Tyr Leu Phe Gly Leu Pro Val Gly Phe
 65 70 75 80

Val Ala Asp Ser Leu Gly Ala Thr Leu Gly Ala Thr Ala Ala Phe Leu
 85 90 95

Leu Gly Arg Thr Ile Gly Lys Ser Tyr Val Thr Ser Lys Ile Lys His
 100 105 110

Tyr Pro Lys Phe Gln Ala Val Ser Val Ala Ile Gln Lys Ser Gly Phe
 115 120 125

Lys Ile Val Leu Leu Leu Arg Val Val Pro Ile Leu Pro Phe Asn Met
 130 135 140

Leu Asn Tyr Leu Leu Ser Val Thr Pro Val Arg Leu Gly Glu Tyr Met
 145 150 155 160

Leu Ala Thr Trp Leu Gly Met Met Gln Pro Ile Thr Phe Ala Leu Val
 165 170 175

Tyr Val Gly Thr Thr Leu Lys Asp Leu Ser Asp Ile Thr His Gly Trp
 180 185 190

His Glu Val Ser Val Phe Arg Trp Val Ile Met Met Val Gly Val Ala
 195 200 205

Leu Ala Val Ile Leu Ile Ile Cys Ile Thr Arg Val Ala Lys Ser Ser
 210 215 220

Leu Asp Lys Ala Leu Ala Glu Asn Gly Thr Glu Leu Asp Gly Lys Lys
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Asn Asp Asp Ala Ser Val Leu Pro Ile Ala Glu Pro Pro Pro Asp Leu
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Gln Glu Pro Leu Val Ile Arg Ile Asp Pro Ser Asn Thr
 260 265

<210> 69
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 <213> unidentified bacterium

<400> 69
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Val Leu Met Leu Pro Ala Phe Leu Leu Ile Met Ala Gly Gly Ala Val
 35 40 45

Phe Gly Val Val Glu Gly Ser Leu Leu Ala Leu Leu Gly Ala Val Leu
 50 55 60

Gly Gly Thr Ala Ala Phe Leu Ile Gly Arg His Tyr Ala Arg Ala Ala
 65 70 75 80

Val Glu Arg Arg Val Ala Ser Asn Pro Thr Leu Ser Ala Leu Asp His
 85 90 95

Val Ile Gly Glu Asp Gly Leu Lys Leu Val Phe Leu Leu Arg Leu Ser
 100 105 110

Pro Ala Val Pro Phe Val Leu Thr Asn Tyr Ala Leu Ser Ile Thr Arg
 115 120 125

Val Arg Leu Arg Asp Phe Phe Ile Gly Thr Leu Gly Leu Ala Pro Ile
 130 135 140

Val Val Met Tyr Ala Ala Tyr Gly Ser Ala Ser Gly Ala Thr Pro Asn
 145 150 155 160

Ala Asp Gly Ser Ala Ala Val Thr Pro Met Met Phe Thr Ala Gly Ile
 165 170 175

Val Val Thr Val Leu Leu Gly Leu Leu Leu Ala Lys Ile Val Gln Lys
 180 185 190

Ala Leu Arg Glu Ala Glu Leu Ser Arg Leu Lys Gln Leu Glu Ile Asp
 195 200 205

Ala Thr Pro Glu Thr Pro Thr Val Leu Pro Thr Pro Ile Thr Glu Ser
 210 215 220

Ile
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<210> 70
 <211> 6540
 <212> DNA
 <213> Homo sapiens

<400> 70

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<210> 71
<211> 139
<212> PRT
<213> Homo sapiens

<400> 71
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35 40 45
Val Val Glu Met Val Ser Glu Val Gly His Leu Ser His Ser His Leu
50 55 60
Leu Leu Pro Lys Val Ser His Val Thr Lys Leu Gln Ile Ile His Lys
65 70 75 80
Gln Lys Ile Lys Ser Arg Leu Thr Lys Ala Met Trp Asn Val Asp Thr
85 90 95
Trp Gly Gln Leu Asn Thr Leu Gln Val Ser Ala Val Arg Phe Glu Ala
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Cys Val Gln Val Ser Pro Arg Gln Met Asp Leu
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<210> 72
<211> 2760
<212> DNA
<213> Homo sapiens

<400> 72
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<210> 73
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 73
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 Phe Leu Phe Pro Pro Gly Ala Ser Lys Leu Gln Leu Ser Leu Gln Ser
 20 25 30
 Asp Arg Arg Lys Leu Ala Phe Ile Lys His Gln Leu Cys Ala Trp Lys
 35 40 45
 Ile His Leu Gln Tyr His Asn Leu Tyr Asn Asn Ser Ala Ile Trp Ile
 50 55 60
 Ser Leu Ser Ala Phe Phe Phe Cys Leu Phe Gly Trp Leu Val Leu Val
 65 70 75 80
 Val Leu Val Ser Gly Ser His Ser Val Ala Gln Ala Gly Ala Trp Trp
 85 90 95

His Asp His Asn Ser Leu Gln Pro
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<210> 74
<211> 1183
<212> DNA
<213> Homo sapiens

<400> 74
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<210> 75
<211> 261
<212> PRT
<213> Homo sapiens

<400> 75
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20 25 30
Ser Lys Ala Thr Ala Val Ala Leu Gly Ser Phe Pro Ala Gly Gly Pro
35 40 45
Ala Glu Leu Ser Leu Arg Leu Gly Glu Pro Leu Thr Ile Val Ser Glu
50 55 60
Asp Gly Asp Trp Trp Thr Val Leu Ser Glu Val Ser Gly Arg Glu Tyr
65 70 75 80
Asn Ile Pro Ser Val His Val Gly Lys Val Ser His Gly Trp Leu Tyr
85 90 95

Glu Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly
 100 105 110
 Asn Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly
 115 120 125
 Ser Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg
 130 135 140
 Ile Arg His Tyr Arg Ile His Cys Leu Asp Asn Gly Trp Leu Tyr Ile
 145 150 155 160
 Ser Pro Arg Leu Thr Phe Pro Ser Leu Gln Ala Leu Val Asp His Tyr
 165 170 175
 Ser Glu Leu Ala Asp Asp Ile Cys Cys Leu Leu Lys Glu Pro Cys Val
 180 185 190
 Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro Leu Pro Val
 195 200 205
 Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp Ser Ser Leu
 210 215 220
 Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu Ser Glu Gly
 225 230 235 240
 Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp Glu Ala Val
 245 250 255
 Ser Leu Asp Asp Ala
 260

<210> 76
 <211> 1183
 <212> DNA
 <213> Homo sapiens

<400> 76
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 gctgtccagc tctttccagt tgagtgggtg cctctgcaca gtcacaggta ggggtatatac 180
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<210> 77
 <211> 261
 <212> PRT
 <213> Homo sapiens

<400> 77
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 20 25 30
 Ser Lys Ala Thr Ala Val Ala Leu Gly Ser Phe Pro Ala Gly Gly Pro
 35 40 45
 Ala Glu Leu Ser Leu Arg Leu Gly Glu Pro Leu Thr Ile Val Ser Glu
 50 55 60
 Asp Gly Asp Trp Trp Thr Val Leu Ser Glu Val Ser Gly Arg Glu Tyr
 65 70 75 80
 Asn Ile Pro Ser Val His Val Ala Lys Val Ser His Gly Trp Leu Tyr
 85 90 95
 Glu Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly
 100 105 110
 Asn Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly
 115 120 125
 Ser Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg
 130 135 140
 Ile Arg His Tyr Arg Ile His Cys Leu Asp Asn Gly Trp Leu Tyr Ile
 145 150 155 160
 Ser Pro Arg Leu Thr Phe Pro Ser Leu Gln Ala Leu Val Asp His Tyr
 165 170 175
 Ser Glu Leu Ala Asp Asp Ile Cys Cys Leu Leu Lys Glu Pro Cys Val
 180 185 190
 Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro Leu Pro Val
 195 200 205
 Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp Ser Ser Leu
 210 215 220
 Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu Ser Glu Gly
 225 230 235 240
 Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp Glu Ala Val

<400> 79

Met Pro Ser Val Tyr Val Ala Lys Val Ala His Gly Trp Leu Tyr Glu
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Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly Asn
20 25 30

Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly Cys
35 40 45

Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg Ile
50 55 60

Arg His Tyr Arg Ile Gln Arg Leu Asp Asn Gly Trp Leu Tyr Ile Ser
65 70 75 80

Pro Arg Leu Thr Phe Pro Ser Leu His Ala Leu Val Glu His Tyr Ser
85 90 95

Glu Leu Ala Asp Gly Ile Cys Cys Pro Leu Arg Glu Pro Cys Val Leu
100 105 110

Gln Lys Leu Gly Pro Leu Pro Gly Lys Asp Thr Pro Pro Pro Val Thr
115 120 125

Val Pro Thr Ser Ser Leu Asn Trp Lys Lys Leu Asp Arg Ser Leu Leu
130 135 140

Phe Leu Glu Ala Pro Ala Ser Gly Glu Ala Ser Leu Leu Ser Glu Gly
145 150 155 160

Leu Arg Glu Ser Leu Ser Ser Tyr Ile Ser Leu Ala Glu Asp Pro Leu
165 170 175

Asp Asp Ala

<210> 80

<211> 281

<212> PRT

<213> Mus musculus

<400> 80

Met Gly Asn Ser Met Lys Ser Thr Ser Pro Pro Ser Glu Arg Pro Leu
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Ser Ser Ser Glu Gly Leu Glu Ser Asp Phe Leu Ala Val Leu Thr Asp
20 25 30

Tyr Pro Ser Pro Asp Ile Ser Pro Pro Ile Phe Arg Arg Gly Glu Lys
35 40 45

Leu Arg Val Ile Ser Asp Glu Gly Gly Trp Trp Lys Ala Ile Ser Leu
50 55 60

Ser Thr Gly Arg Glu Ser Tyr Ile Pro Gly Ile Cys Val Ala Arg Val

65	70	75	80
Tyr His Gly Trp Leu Phe Glu Gly Leu Gly Arg Asp Lys Ala Glu Glu	85	90	95
Leu Leu Gln Leu Pro Asp Thr Lys Ile Gly Ser Phe Met Ile Arg Glu	100	105	110
Ser Glu Thr Lys Lys Gly Phe Tyr Ser Leu Ser Val Arg His Arg Gln	115	120	125
Val Lys His Tyr Arg Ile Phe Arg Leu Pro Asn Asn Trp Tyr Tyr Ile	130	135	140
Ser Pro Arg Leu Thr Phe Gln Cys Leu Glu Asp Leu Val Thr His Tyr	145	150	155
Ser Glu Val Ala Asp Gly Leu Cys Cys Val Leu Thr Thr Pro Cys Leu	165	170	175
Ala Gln Asn Ile Pro Ala Pro Thr Ser His Pro Ser Pro Cys Thr Ser	180	185	190
Pro Gly Ser Pro Val Thr Leu Arg Gln Lys Thr Phe Asp Trp Lys Arg	195	200	205
Val Ser Arg Leu Gln Glu Gly Ser Glu Gly Ala Glu Asn Pro Leu Arg	210	215	220
Val Asp Glu Ser Leu Phe Ser Tyr Gly Leu Arg Glu Ser Ile Ala Ser	225	230	235
Tyr Leu Ser Leu Thr Gly Asp Asp Ser Ser Ser Phe Asp Arg Lys Lys	245	250	255
Lys Ser Leu Ser Leu Met Tyr Thr Gly Ser Lys Arg Lys Ser Ser Phe	260	265	270
Phe Ser Ala Pro Gln Tyr Phe Glu Asp	275	280	

<210> 81
 <211> 276
 <212> PRT
 <213> Homo sapiens

<400> 81																
Met Gly Asn Ser Met Lys Ser Thr Pro Ala Pro Ala Glu Arg Pro Leu	1	5	10	15												
Pro Asn Pro Glu Gly Leu Asp Ser Asp Phe Leu Ala Val Leu Ser Asp	20	25	30													
Tyr Pro Ser Pro Asp Ile Ser Pro Pro Ile Phe Arg Arg Gly Glu Lys	35	40	45													

Leu Arg Val Ile Ser Asp Glu Gly Gly Trp Trp Lys Ala Ile Ser Leu
 50 55 60
 Ser Thr Gly Arg Glu Ser Tyr Ile Pro Gly Ile Cys Val Ala Arg Val
 65 70 75 80
 Tyr His Gly Trp Leu Phe Glu Gly Leu Gly Arg Asp Lys Ala Glu Glu
 85 90 95
 Leu Leu Gln Leu Pro Asp Thr Lys Val Gly Ser Phe Met Ile Arg Glu
 100 105 110
 Ser Glu Thr Lys Lys Gly Phe Tyr Ser Leu Ser Val Arg His Arg Gln
 115 120 125
 Val Lys His Tyr Arg Ile Phe Arg Leu Pro Asn Asn Trp Tyr Tyr Ile
 130 135 140
 Ser Pro Arg Leu Thr Phe Gln Cys Leu Glu Asp Leu Val Asn His Tyr
 145 150 155 160
 Ser Glu Val Ala Asp Gly Leu Cys Cys Val Leu Thr Thr Pro Cys Leu
 165 170 175
 Thr Gln Ser Thr Ala Ala Pro Ala Val Arg Ala Ser Ser Ser Pro Val
 180 185 190
 Thr Leu Arg Gln Lys Thr Val Asp Trp Arg Arg Val Ser Arg Leu Gln
 195 200 205
 Glu Asp Pro Glu Gly Thr Glu Asn Pro Leu Gly Val Asp Glu Ser Leu
 210 215 220
 Phe Ser Tyr Gly Leu Arg Glu Ser Ile Ala Ser Tyr Leu Ser Leu Thr
 225 230 235 240
 Ser Glu Asp Asn Thr Ser Phe Asp Arg Lys Lys Lys Ser Ile Ser Leu
 245 250 255
 Met Tyr Gly Gly Ser Lys Arg Lys Ser Ser Phe Phe Ser Ser Pro Pro
 260 265 270
 Tyr Phe Glu Asp
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<210> 82
 <211> 5193
 <212> DNA
 <213> Homo sapiens

<400> 82
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ccgcatcctg gaggcggcaa agggtgaaat ccgcattgat ggctcaatg tggcagacat 4140
cggcctccat gacctgcgt ctcagctgac catcatccc caggacccca tcctgttctc 4200
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ccagtgtcga gagggcgggg agaattctcag cgtgggccag aggcagctcg tgtgcctggc 4380
ccgagccctg ctccgcaaga gccgcatect ggttttagac gaggccacag ctgccatcga 4440
cctggagact gacaacctca tccaggctac catccgcacc cagtttgata cctgcactgt 4500
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caaaggagta gtactgaat ttgattctcc agccaacctc attgcagcta gaggcactct 4620
ctacgggatg gccagagatg ctggacttgc ctaaaatata ttcttgagat ttctctctgg 4680
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tagcaaacac tgggggcacc ttaagatttt gcacctgtaa agtgccttac agggtaactg 4800
tgctgaatgc tttagatgag gaaatgatcc ccaagtgggtg aatgacacgc ctaaggtcac 4860
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agaagacagc tgctgggtca ggccaccctc aggaactcag tcctgtactc tgggggtgctg 5100
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 5193

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<210> 83
<211> 1527
<212> PRT
<213> Homo sapiens

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<400> 83
Met Asp Ala Leu Cys Gly Ser Gly Glu Leu Gly Ser Lys Phe Trp Asp
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Ser Asn Leu Ser Val His Thr Glu Asn Pro Asp Leu Thr Pro Cys Phe
      20             25             30

Gln Asn Ser Leu Leu Ala Trp Val Pro Cys Ile Tyr Leu Trp Val Ala
      35             40             45

Leu Pro Cys Tyr Leu Leu Tyr Leu Arg His His Cys Arg Gly Tyr Ile
      50             55             60

Ile Leu Ser His Leu Ser Lys Leu Lys Met Val Leu Gly Val Leu Leu
      65             70             75             80

Trp Cys Val Ser Trp Ala Asp Leu Phe Tyr Ser Phe His Gly Leu Val
      85             90             95

His Gly Arg Ala Pro Ala Pro Val Phe Phe Val Thr Pro Leu Val Val
      100            105            110

Gly Val Thr Met Leu Leu Ala Thr Leu Leu Ile Gln Tyr Glu Arg Leu
      115            120            125

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Gln	Gly	Val	Gln	Ser	Ser	Gly	Val	Leu	Ile	Ile	Phe	Trp	Phe	Leu	Cys	130	135	140
Val	Val	Cys	Ala	Ile	Val	Pro	Phe	Arg	Ser	Lys	Ile	Leu	Leu	Ala	Lys	145	150	155
Ala	Glu	Gly	Glu	Ile	Ser	Asp	Pro	Phe	Arg	Phe	Thr	Thr	Phe	Tyr	Ile	165	170	175
His	Phe	Ala	Leu	Val	Leu	Ser	Ala	Leu	Ile	Leu	Ala	Cys	Phe	Arg	Glu	180	185	190
Lys	Pro	Pro	Phe	Phe	Ser	Ala	Lys	Asn	Val	Asp	Pro	Asn	Pro	Tyr	Pro	195	200	205
Glu	Thr	Ser	Ala	Gly	Phe	Leu	Ser	Arg	Leu	Phe	Phe	Trp	Trp	Phe	Thr	210	215	220
Lys	Met	Ala	Ile	Tyr	Gly	Tyr	Arg	His	Pro	Leu	Glu	Glu	Lys	Asp	Leu	225	230	235
Trp	Ser	Leu	Lys	Glu	Glu	Asp	Arg	Ser	Gln	Met	Val	Val	Gln	Gln	Leu	245	250	255
Leu	Glu	Ala	Trp	Arg	Lys	Gln	Glu	Lys	Gln	Thr	Ala	Arg	His	Lys	Ala	260	265	270
Ser	Ala	Ala	Pro	Gly	Lys	Asn	Ala	Ser	Gly	Glu	Asp	Glu	Val	Leu	Leu	275	280	285
Gly	Ala	Arg	Pro	Arg	Pro	Arg	Lys	Pro	Ser	Phe	Leu	Lys	Ala	Leu	Leu	290	295	300
Ala	Thr	Phe	Gly	Ser	Ser	Phe	Leu	Ile	Ser	Ala	Cys	Phe	Lys	Leu	Ile	305	310	315
Gln	Asp	Leu	Leu	Ser	Phe	Ile	Asn	Pro	Gln	Leu	Leu	Ser	Ile	Leu	Ile	325	330	335
Arg	Phe	Ile	Ser	Asn	Pro	Met	Ala	Pro	Ser	Trp	Trp	Gly	Phe	Leu	Val	340	345	350
Ala	Gly	Leu	Met	Phe	Leu	Cys	Ser	Met	Met	Gln	Ser	Leu	Ile	Leu	Gln	355	360	365
His	Tyr	Tyr	His	Tyr	Ile	Phe	Val	Thr	Gly	Val	Lys	Phe	Arg	Thr	Gly	370	375	380
Ile	Met	Gly	Val	Ile	Tyr	Arg	Lys	Ala	Leu	Val	Ile	Thr	Asn	Ser	Val	385	390	395
Lys	Arg	Ala	Ser	Thr	Val	Gly	Glu	Ile	Val	Asn	Leu	Met	Ser	Val	Asp	405	410	415
Ala	Gln	Arg	Phe	Met	Asp	Leu	Ala	Pro	Phe	Leu	Asn	Leu	Leu	Trp	Ser	420	425	430

Ala	Pro	Leu	Gln	Ile	Ile	Leu	Ala	Ile	Tyr	Phe	Leu	Trp	Gln	Asn	Leu	435	440	445	
Gly	Pro	Ser	Val	Leu	Ala	Gly	Val	Ala	Phe	Met	Val	Leu	Leu	Ile	Pro	450	455	460	
Leu	Asn	Gly	Ala	Val	Ala	Val	Lys	Met	Arg	Ala	Phe	Gln	Val	Lys	Gln	465	470	475	480
Met	Lys	Leu	Lys	Asp	Ser	Arg	Ile	Lys	Leu	Met	Ser	Glu	Ile	Leu	Asn	485	490	495	
Gly	Ile	Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Pro	Ser	Phe	Leu	Lys	500	505	510	
Gln	Val	Glu	Gly	Ile	Arg	Gln	Gly	Glu	Leu	Gln	Leu	Leu	Arg	Thr	Ala	515	520	525	
Ala	Tyr	Leu	His	Thr	Thr	Thr	Thr	Phe	Thr	Trp	Met	Cys	Ser	Pro	Phe	530	535	540	
Leu	Val	Thr	Leu	Ile	Thr	Leu	Trp	Val	Tyr	Val	Tyr	Val	Asp	Pro	Asn	545	550	555	560
Asn	Val	Leu	Asp	Ala	Glu	Lys	Ala	Phe	Val	Ser	Val	Ser	Leu	Phe	Asn	565	570	575	
Ile	Leu	Arg	Leu	Pro	Leu	Asn	Met	Leu	Pro	Gln	Leu	Ile	Ser	Asn	Leu	580	585	590	
Thr	Gln	Ala	Ser	Val	Ser	Leu	Lys	Arg	Ile	Gln	Gln	Phe	Leu	Ser	Gln	595	600	605	
Glu	Glu	Leu	Asp	Pro	Gln	Ser	Val	Glu	Arg	Lys	Thr	Ile	Ser	Pro	Gly	610	615	620	
Tyr	Ala	Ile	Thr	Ile	His	Ser	Gly	Thr	Phe	Thr	Trp	Ala	Gln	Asp	Leu	625	630	635	640
Pro	Pro	Thr	Leu	His	Ser	Leu	Asp	Ile	Gln	Val	Pro	Lys	Gly	Ala	Leu	645	650	655	
Val	Ala	Val	Val	Gly	Pro	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Val	Ser	660	665	670	
Ala	Leu	Leu	Gly	Glu	Met	Glu	Lys	Leu	Glu	Gly	Lys	Val	His	Met	Lys	675	680	685	
Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Cys	Thr	690	695	700	
Leu	Gln	Glu	Asn	Val	Leu	Phe	Gly	Lys	Ala	Leu	Asn	Pro	Lys	Arg	Tyr	705	710	715	720
Gln	Gln	Thr	Leu	Glu	Ala	Cys	Ala	Leu	Leu	Ala	Asp	Leu	Glu	Met	Leu	725	730	735	

Pro Gly Gly Asp Gln Thr Glu Ile Gly Glu Lys Gly Ile Asn Leu Ser
 740 745 750
 Gly Gly Gln Arg Gln Arg Val Ser Leu Ala Arg Ala Val Tyr Ser Asp
 755 760 765
 Ala Asp Ile Phe Leu Leu Asp Asp Pro Leu Ser Ala Val Asp Ser His
 770 775 780
 Val Ala Lys His Ile Phe Asp His Val Ile Gly Pro Glu Gly Val Leu
 785 790 795 800
 Ala Gly Lys Thr Arg Val Leu Val Thr His Gly Ile Ser Phe Leu Pro
 805 810 815
 Gln Thr Asp Phe Ile Ile Val Leu Ala Asp Gly Gln Val Ser Glu Met
 820 825 830
 Gly Pro Tyr Pro Ala Leu Leu Gln Arg Asn Gly Ser Phe Ala Asn Phe
 835 840 845
 Leu Cys Asn Tyr Ala Pro Asp Glu Asp Gln Gly His Leu Glu Asp Ser
 850 855 860
 Trp Thr Ala Leu Glu Gly Ala Glu Asp Lys Glu Ala Leu Leu Ile Glu
 865 870 875 880
 Asp Thr Leu Ser Asn His Thr Asp Leu Thr Asp Asn Asp Pro Val Thr
 885 890 895
 Tyr Val Val Gln Lys Gln Phe Met Arg Gln Leu Ser Ala Leu Ser Ser
 900 905 910
 Asp Gly Glu Gly Gln Gly Arg Pro Val Pro Arg Arg His Leu Gly Pro
 915 920 925
 Ser Glu Lys Val Gln Val Thr Glu Ala Lys Ala Asp Gly Ala Leu Thr
 930 935 940
 Gln Glu Glu Lys Ala Ala Ile Gly Thr Val Glu Leu Ser Val Phe Trp
 945 950 955 960
 Asp Tyr Ala Lys Ala Val Gly Leu Cys Thr Thr Leu Ala Ile Cys Leu
 965 970 975
 Leu Tyr Val Gly Gln Ser Ala Ala Ala Ile Gly Ala Asn Val Trp Leu
 980 985 990
 Ser Ala Trp Thr Asn Asp Ala Met Ala Asp Ser Arg Gln Asn Asn Thr
 995 1000 1005
 Ser Leu Arg Leu Gly Val Tyr Ala Ala Leu Gly Ile Leu Gln Gly Phe
 1010 1015 1020
 Leu Val Met Leu Ala Ala Met Ala Met Ala Ala Gly Gly Ile Gln Ala
 1025 1030 1035 1040

Ala Arg Val Leu His Gln Ala Leu Leu His Asn Lys Ile Arg Ser Pro
 1045 1050 1055
 Gln Ser Phe Phe Asp Thr Thr Pro Ser Gly Arg Ile Leu Asn Cys Phe
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 Ser Lys Asp Ile Tyr Val Val Asp Glu Val Leu Ala Pro Val Ile Leu
 1075 1080 1085
 Met Leu Leu Asn Ser Phe Phe Asn Ala Ile Ser Thr Leu Val Val Ile
 1090 1095 1100
 Met Ala Ser Thr Pro Leu Phe Thr Val Val Ile Leu Pro Leu Ala Val
 1105 1110 1115 1120
 Leu Tyr Thr Leu Val Gln Arg Phe Tyr Ala Ala Thr Ser Arg Gln Leu
 1125 1130 1135
 Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Ile Tyr Ser His Phe Ser
 1140 1145 1150
 Glu Thr Val Thr Gly Ala Ser Val Ile Arg Ala Tyr Asn Arg Ser Arg
 1155 1160 1165
 Asp Phe Glu Ile Ile Ser Asp Thr Lys Val Asp Ala Asn Gln Arg Ser
 1170 1175 1180
 Cys Tyr Pro Tyr Ile Ile Ser Asn Arg Trp Leu Ser Ile Gly Val Glu
 1185 1190 1195 1200
 Phe Val Gly Asn Cys Val Val Leu Phe Ala Ala Leu Phe Ala Val Ile
 1205 1210 1215
 Gly Arg Ser Ser Leu Asn Pro Gly Leu Val Gly Leu Ser Val Ser Tyr
 1220 1225 1230
 Ser Leu Gln Val Thr Phe Ala Leu Asn Trp Met Ile Arg Met Met Ser
 1235 1240 1245
 Asp Leu Glu Ser Asn Ile Val Ala Val Glu Arg Val Lys Glu Tyr Ser
 1250 1255 1260
 Lys Thr Glu Thr Glu Ala Pro Trp Val Val Glu Gly Ser Arg Pro Pro
 1265 1270 1275 1280
 Glu Gly Trp Pro Pro Arg Gly Glu Val Glu Phe Arg Asn Tyr Ser Val
 1285 1290 1295
 Arg Tyr Arg Pro Gly Leu Asp Leu Val Leu Arg Asp Leu Ser Leu His
 1300 1305 1310
 Val His Gly Gly Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly
 1315 1320 1325
 Lys Ser Ser Met Thr Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Lys
 1330 1335 1340

Gly Glu Ile Arg Ile Asp Gly Leu Asn Val Ala Asp Ile Gly Leu His
 1345 1350 1355 1360
 Asp Leu Arg Ser Gln Leu Thr Ile Ile Pro Gln Asp Pro Ile Leu Phe
 1365 1370 1375
 Ser Gly Thr Leu Arg Met Asn Leu Asp Pro Phe Gly Ser Tyr Ser Glu
 1380 1385 1390
 Glu Asp Ile Trp Trp Ala Leu Glu Leu Ser His Leu His Thr Phe Val
 1395 1400 1405
 Ser Ser Gln Pro Ala Gly Leu Asp Phe Gln Cys Ser Glu Gly Gly Glu
 1410 1415 1420
 Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Leu
 1425 1430 1435 1440
 Leu Arg Lys Ser Arg Ile Leu Val Leu Asp Glu Ala Thr Ala Ala Ile
 1445 1450 1455
 Asp Leu Glu Thr Asp Asn Leu Ile Gln Ala Thr Ile Arg Thr Gln Phe
 1460 1465 1470
 Asp Thr Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile Met
 1475 1480 1485
 Asp Tyr Thr Arg Val Leu Val Leu Asp Lys Gly Val Val Ala Glu Phe
 1490 1495 1500
 Asp Ser Pro Ala Asn Leu Ile Ala Ala Arg Gly Ile Phe Tyr Gly Met
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 Ala Arg Asp Ala Gly Leu Ala
 1525

<210> 84
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 <212> PRT
 <213> Homo sapiens

<400> 84
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 Gln Asn Ser Leu Leu Ala Trp Val Pro Cys Ile Tyr Leu Trp Val Ala
 35 40 45
 Leu Pro Cys Tyr Leu Leu Tyr Leu Arg His His Cys Arg Gly Tyr Ile
 50 55 60
 Ile Leu Ser His Leu Ser Lys Leu Lys Met Val Leu Gly Val Leu Leu
 65 70 75 80

Trp Cys Val Ser Trp Ala Asp Leu Phe Tyr Ser Phe His Gly Leu Val
 85 90 95
 His Gly Arg Ala Pro Ala Pro Val Phe Phe Val Thr Pro Leu Val Val
 100 105 110
 Gly Val Thr Met Leu Leu Ala Thr Leu Leu Ile Gln Tyr Glu Arg Leu
 115 120 125
 Gln Gly Val Gln Ser Ser Gly Val Leu Ile Ile Phe Trp Phe Leu Cys
 130 135 140
 Val Val Cys Ala Ile Val Pro Phe Arg Ser Lys Ile Leu Leu Ala Lys
 145 150 155 160
 Ala Glu Gly Glu Ile Ser Asp Pro Phe Arg Phe Thr Thr Phe Tyr Ile
 165 170 175
 His Phe Ala Leu Val Leu Ser Ala Leu Ile Leu Ala Cys Phe Arg Glu
 180 185 190
 Lys Pro Pro Phe Phe Ser Ala Lys Asn Val Asp Pro Asn Pro Tyr Pro
 195 200 205
 Glu Thr Ser Ala Gly Phe Leu Ser Arg Leu Phe Phe Trp Trp Phe Thr
 210 215 220
 Lys Met Ala Ile Tyr Gly Tyr Arg His Pro Leu Glu Glu Lys Asp Leu
 225 230 235 240
 Trp Ser Leu Lys Glu Glu Asp Arg Ser Gln Met Val Val Gln Gln Leu
 245 250 255
 Leu Glu Ala Trp Arg Lys Gln Glu Lys Gln Thr Ala Arg His Lys Ala
 260 265 270
 Ser Ala Ala Pro Gly Lys Asn Ala Ser Gly Glu Asp Glu Val Leu Leu
 275 280 285
 Gly Ala Arg Pro Arg Pro Arg Lys Pro Ser Phe Leu Lys Ala Leu Leu
 290 295 300
 Ala Thr Phe Gly Ser Ser Phe Leu Ile Ser Ala Cys Phe Lys Leu Ile
 305 310 315 320
 Gln Asp Leu Leu Ser Phe Ile Asn Pro Gln Leu Leu Ser Ile Leu Ile
 325 330 335
 Arg Phe Ile Ser Asn Pro Met Ala Pro Ser Trp Trp Gly Phe Leu Val
 340 345 350
 Ala Gly Leu Met Phe Leu Cys Ser Met Met Gln Ser Leu Ile Leu Gln
 355 360 365
 His Tyr Tyr His Tyr Ile Phe Val Thr Gly Val Lys Phe Arg Thr Gly
 370 375 380

Ile Met Gly Val	Ile Tyr Arg Lys Ala Leu Val	Ile Thr Asn Ser Val
385	390	395 400
Lys Arg Ala Ser Thr Val Gly Glu Ile Val Asn Leu Met Ser Val Asp		
	405	410 415
Ala Gln Arg Phe Met Asp Leu Ala Pro Phe Leu Asn Leu Leu Trp Ser		
	420	425 430
Ala Pro Leu Gln Ile Ile Leu Ala Ile Tyr Phe Leu Trp Gln Asn Leu		
	435	440 445
Gly Pro Ser Val Leu Ala Gly Val Ala Phe Met Val Leu Leu Ile Pro		
	450	455 460
Leu Asn Gly Ala Val Ala Val Lys Met Arg Ala Phe Gln Val Lys Gln		
	465	470 475 480
Met Lys Leu Lys Asp Ser Arg Ile Lys Leu Met Ser Glu Ile Leu Asn		
	485	490 495
Gly Ile Lys Val Leu Lys Leu Tyr Ala Trp Glu Pro Ser Phe Leu Lys		
	500	505 510
Gln Val Glu Gly Ile Arg Gln Gly Glu Leu Gln Leu Leu Arg Thr Ala		
	515	520 525
Ala Tyr Leu His Thr Thr Thr Thr Phe Thr Trp Met Cys Ser Pro Phe		
	530	535 540
Leu Val Thr Leu Ile Thr Leu Trp Val Tyr Val Tyr Val Asp Pro Asn		
	545	550 555 560
Asn Val Leu Asp Ala Glu Lys Ala Phe Val Ser Val Ser Leu Phe Asn		
	565	570 575
Ile Leu Arg Leu Pro Leu Asn Met Leu Pro Gln Leu Ile Ser Asn Leu		
	580	585 590
Thr Gln Ala Ser Val Ser Leu Lys Arg Ile Gln Gln Phe Leu Ser Gln		
	595	600 605
Glu Glu Leu Asp Pro Gln Ser Val Glu Arg Lys Thr Ile Ser Pro Gly		
	610	615 620
Tyr Ala Ile Thr Ile His Ser Gly Thr Phe Thr Trp Ala Gln Asp Leu		
	625	630 635 640
Pro Pro Thr Leu His Ser Leu Asp Ile Gln Val Pro Lys Gly Ala Leu		
	645	650 655
Val Ala Val Val Gly Pro Val Gly Cys Gly Lys Ser Ser Leu Val Ser		
	660	665 670
Ala Leu Leu Gly Glu Met Glu Lys Leu Glu Gly Lys Val His Met Lys		
	675	680 685

Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Cys	Thr	690	695	700	
Leu	Gln	Glu	Asn	Val	Leu	Phe	Gly	Lys	Ala	Leu	Asn	Pro	Lys	Arg	Tyr	705	710	715	720
Gln	Gln	Thr	Leu	Glu	Ala	Cys	Ala	Leu	Leu	Ala	Asp	Leu	Glu	Met	Leu	725	730	735	
Pro	Gly	Gly	Asp	Gln	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Ile	Asn	Leu	Ser	740	745	750	
Gly	Gly	Gln	Arg	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser	Asp	755	760	765	
Ala	Asp	Ile	Phe	Leu	Leu	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ser	His	770	775	780	
Val	Ala	Lys	His	Ile	Phe	Asp	His	Val	Ile	Gly	Pro	Glu	Gly	Val	Leu	785	790	795	800
Ala	Gly	Lys	Thr	Arg	Val	Leu	Val	Thr	His	Gly	Ile	Ser	Phe	Leu	Pro	805	810	815	
Gln	Thr	Asp	Phe	Ile	Ile	Val	Leu	Ala	Asp	Gly	Gln	Val	Ser	Glu	Met	820	825	830	
Gly	Pro	Tyr	Pro	Ala	Leu	Leu	Gln	Arg	Asn	Gly	Ser	Phe	Ala	Asn	Phe	835	840	845	
Leu	Cys	Asn	Tyr	Ala	Pro	Asp	Glu	Asp	Gln	Gly	His	Leu	Glu	Asp	Ser	850	855	860	
Trp	Thr	Ala	Leu	Glu	Gly	Ala	Glu	Asp	Lys	Glu	Ala	Leu	Leu	Ile	Glu	865	870	875	880
Asp	Thr	Leu	Ser	Asn	His	Thr	Asp	Leu	Thr	Asp	Asn	Asp	Pro	Val	Thr	885	890	895	
Tyr	Val	Val	Gln	Lys	Gln	Phe	Met	Arg	Gln	Leu	Ser	Ala	Leu	Ser	Ser	900	905	910	
Asp	Gly	Glu	Gly	Gln	Gly	Arg	Pro	Val	Pro	Arg	Arg	His	Leu	Gly	Pro	915	920	925	
Ser	Glu	Lys	Val	Gln	Val	Thr	Glu	Ala	Lys	Ala	Asp	Gly	Ala	Leu	Thr	930	935	940	
Gln	Glu	Glu	Lys	Ala	Ala	Ile	Gly	Thr	Val	Glu	Leu	Ser	Val	Phe	Trp	945	950	955	960
Asp	Tyr	Ala	Lys	Ala	Val	Gly	Leu	Cys	Thr	Thr	Leu	Ala	Ile	Cys	Leu	965	970	975	
Leu	Tyr	Val	Gly	Gln	Ser	Ala	Ala	Ala	Ile	Gly	Ala	Asn	Val	Trp	Leu	980	985	990	

Ser Ala Trp Thr Asn Asp Ala Met Ala Asp Ser Arg Gln Asn Asn Thr
 995 1000 1005
 Ser Leu Arg Leu Gly Val Tyr Ala Ala Leu Gly Ile Leu Gln Gly Phe
 1010 1015 1020
 Leu Val Met Leu Ala Ala Met Ala Met Ala Ala Gly Gly Ile Gln Ala
 1025 1030 1035 1040
 Ala Arg Val Leu His Gln Ala Leu Leu His Asn Lys Ile Arg Ser Pro
 1045 1050 1055
 Gln Ser Phe Phe Asp Thr Thr Pro Ser Gly Arg Ile Leu Asn Cys Phe
 1060 1065 1070
 Ser Lys Asp Ile Tyr Val Val Asp Glu Val Leu Ala Pro Val Ile Leu
 1075 1080 1085
 Met Leu Leu Asn Ser Phe Phe Asn Ala Ile Ser Thr Leu Val Val Ile
 1090 1095 1100
 Met Ala Ser Thr Pro Leu Phe Thr Val Val Ile Leu Pro Leu Ala Val
 1105 1110 1115 1120
 Leu Tyr Thr Leu Val Gln Arg Phe Tyr Ala Ala Thr Ser Arg Gln Leu
 1125 1130 1135
 Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Ile Tyr Ser His Phe Ser
 1140 1145 1150
 Glu Thr Val Thr Gly Ala Ser Val Ile Arg Ala Tyr Asn Arg Ser Arg
 1155 1160 1165
 Asp Phe Glu Ile Ile Ser Asp Thr Lys Val Asp Ala Asn Gln Arg Ser
 1170 1175 1180
 Cys Tyr Pro Tyr Ile Ile Ser Asn Arg Trp Leu Ser Ile Gly Val Glu
 1185 1190 1195 1200
 Phe Val Gly Asn Cys Val Val Leu Phe Ala Ala Leu Phe Ala Val Ile
 1205 1210 1215
 Gly Arg Ser Ser Leu Asn Pro Gly Leu Val Gly Leu Ser Val Ser Tyr
 1220 1225 1230
 Ser Leu Gln Val Thr Phe Ala Leu Asn Trp Met Ile Arg Met Met Ser
 1235 1240 1245
 Asp Leu Glu Ser Asn Ile Val Ala Val Glu Arg Val Lys Glu Tyr Ser
 1250 1255 1260
 Lys Thr Glu Thr Glu Ala Pro Trp Val Val Glu Gly Ser Arg Pro Pro
 1265 1270 1275 1280
 Glu Gly Trp Pro Pro Arg Gly Glu Val Glu Phe Arg Asn Tyr Ser Val
 1285 1290 1295

Arg Tyr Arg Pro Gly Leu Asp Leu Val Leu Arg Asp Leu Ser Leu His
1300 1305 1310

Val His Gly Gly Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly
1315 1320 1325

Lys Ser Ser Met Thr Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Lys
1330 1335 1340

Gly Glu Ile Arg Ile Asp Gly Leu Asn Val Ala Asp Ile Gly Leu His
1345 1350 1355 1360

Asp Leu Arg Ser Gln Leu Thr Ile Ile Pro Gln Asp Pro Ile Leu Phe
1365 1370 1375

Ser Gly Thr Leu Arg Met Asn Leu Asp Pro Phe Gly Ser Tyr Ser Glu
1380 1385 1390

Glu Asp Ile Trp Trp Ala Leu Glu Leu Ser His Leu His Thr Phe Val
1395 1400 1405

Ser Ser Gln Pro Ala Gly Leu Asp Phe Gln Cys Ser Glu Gly Gly Glu
1410 1415 1420

Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Leu
1425 1430 1435 1440

Leu Arg Lys Ser Arg Ile Leu Val Leu Asp Glu Ala Thr Ala Ala Ile
1445 1450 1455

Asp Leu Glu Thr Asp Asn Leu Ile Gln Ala Thr Ile Arg Thr Gln Phe
1460 1465 1470

Asp Thr Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile Met
1475 1480 1485

Asp Tyr Thr Arg Val Leu Val Leu Asp Lys Gly Val Val Ala Glu Phe
1490 1495 1500

Asp Ser Pro Ala Asn Leu Ile Ala Ala Arg Gly Ile Phe Tyr Gly Met
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Ala Arg Asp Ala Gly Leu Ala
1525

<210> 85

<211> 1522

<212> PRT

<213> Rattus norvegicus

<400> 85

Met Asp Arg Leu Cys Gly Ser Gly Glu Leu Gly Ser Lys Phe Trp Asp
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Ser Asn Leu Thr Val Tyr Thr Asn Thr Pro Asp Leu Thr Pro Cys Phe

325										330					335				
Leu	Phe	Arg	Pro	His	Gly	Pro	Tyr	Trp	Trp	Gly	Phe	Leu	Leu	Ala	Gly				
			340					345					350						
Leu	Met	Phe	Val	Ser	Ser	Thr	Met	Gln	Thr	Leu	Ile	Leu	His	Gln	His				
		355					360					365							
Tyr	His	Cys	Ile	Phe	Val	Met	Ala	Leu	Arg	Ile	Arg	Thr	Ala	Ile	Ile				
	370					375					380								
Gly	Val	Ile	Tyr	Arg	Lys	Ala	Leu	Thr	Ile	Thr	Asn	Ser	Val	Lys	Arg				
385					390					395					400				
Glu	Tyr	Thr	Val	Gly	Glu	Met	Val	Asn	Leu	Met	Ser	Val	Asp	Ala	Gln				
			405					410						415					
Arg	Phe	Met	Asp	Val	Ser	Pro	Phe	Ile	Asn	Leu	Leu	Trp	Ser	Ala	Pro				
			420					425					430						
Leu	Gln	Val	Ile	Leu	Ala	Ile	Tyr	Phe	Leu	Trp	Gln	Ile	Leu	Gly	Pro				
	435						440					445							
Ser	Ala	Leu	Ala	Gly	Val	Ala	Val	Ile	Val	Leu	Leu	Ile	Pro	Leu	Asn				
	450					455					460								
Gly	Ala	Val	Ser	Met	Lys	Met	Lys	Thr	Tyr	Gln	Val	Gln	Gln	Met	Lys				
465					470					475					480				
Phe	Lys	Asp	Ser	Arg	Ile	Lys	Leu	Met	Ser	Glu	Ile	Leu	Asn	Gly	Ile				
			485						490					495					
Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Pro	Thr	Phe	Leu	Glu	Gln	Val				
		500						505					510						
Glu	Gly	Ile	Arg	Gln	Gly	Glu	Leu	Gln	Leu	Leu	Arg	Lys	Gly	Ala	Tyr				
	515						520					525							
Leu	Gln	Ala	Ile	Ser	Thr	Phe	Ile	Trp	Val	Cys	Thr	Pro	Phe	Met	Val				
	530					535					540								
Thr	Leu	Ile	Thr	Leu	Gly	Val	Tyr	Val	Cys	Val	Asp	Lys	Asn	Asn	Val				
545					550					555					560				
Leu	Asp	Ala	Glu	Lys	Ala	Phe	Val	Ser	Leu	Ser	Leu	Phe	Asn	Ile	Leu				
			565						570					575					
Lys	Ile	Pro	Leu	Asn	Leu	Leu	Pro	Gln	Leu	Ile	Ser	Gly	Met	Thr	Gln				
		580						585					590						
Thr	Ser	Val	Ser	Leu	Lys	Arg	Ile	Gln	Asp	Phe	Leu	Asn	Gln	Asp	Glu				
	595						600					605							
Leu	Asp	Pro	Gln	Cys	Val	Glu	Arg	Lys	Thr	Ile	Ser	Pro	Gly	Arg	Ala				
	610					615					620								
Ile	Thr	Ile	His	Asn	Gly	Thr	Phe	Ser	Trp	Ser	Lys	Asp	Leu	Pro	Pro				

625		630		635		640
Thr Leu His Ser	Ile Asn Ile Gln Ile	Pro Lys Gly Ala Leu Val Ala				
	645	650			655	
Val Val Gly Pro	Val Gly Cys Gly Lys Ser Ser Leu Val Ser Ala Leu					
	660	665			670	
Leu Gly Glu Met	Glu Lys Leu Glu Gly Ala Val Ser Val Lys Gly Ser					
	675	680			685	
Val Ala Tyr Val	Pro Gln Gln Ala Trp Ile Gln Asn Cys Thr Leu Gln					
	690	695			700	
Glu Asn Val Leu	Phe Gly Gln Pro Met Asn Pro Lys Arg Tyr Gln Gln					
	705	710			715	720
Ala Leu Glu Thr	Cys Ala Leu Leu Ala Asp Leu Asp Val Leu Pro Gly					
	725	730			735	
Gly Asp Gln Thr	Glu Ile Gly Glu Lys Gly Ile Asn Leu Ser Gly Gly					
	740	745			750	
Gln Arg Gln Arg	Val Ser Leu Ala Arg Ala Val Tyr Ser Asp Ala Asn					
	755	760			765	
Ile Phe Leu Leu	Asp Asp Pro Leu Ser Ala Val Asp Ser His Val Ala					
	770	775			780	
Lys His Ile Phe	Asp Gln Val Ile Gly Pro Glu Gly Val Leu Ala Gly					
	785	790			795	800
Lys Thr Arg Val	Leu Val Thr His Gly Ile Ser Phe Leu Pro Gln Thr					
	805	810			815	
Asp Phe Ile Ile	Val Leu Ala Asp Gly Gln Ile Thr Glu Met Gly His					
	820	825			830	
Tyr Ser Glu Leu	Leu Gln His Asp Gly Ser Phe Ala Asn Phe Leu Arg					
	835	840			845	
Asn Tyr Ala Pro	Asp Glu Asn Gln Glu Ala Asn Glu Gly Val Leu Gln					
	850	855			860	
His Ala Asn Glu	Glu Val Leu Leu Leu Glu Asp Thr Leu Ser Thr His					
	865	870			875	880
Thr Asp Leu Thr	Asp Thr Glu Pro Ala Ile Tyr Glu Val Arg Lys Gln					
	885	890			895	
Phe Met Arg Glu	Met Ser Ser Leu Ser Ser Glu Gly Glu Gly Gln Asn					
	900	905			910	
Arg Pro Val Leu	Lys Arg Tyr Thr Ser Ser Leu Glu Lys Glu Val Pro					
	915	920			925	
Ala Thr Gln Thr	Lys Glu Thr Gly Ala Leu Ile Lys Glu Glu Ile Ala					

930	935	940
Glu Thr Gly Asn Val Lys Leu Ser Val Tyr Trp Asp Tyr Ala Lys Ser 945 950 955 960		
Val Gly Leu Cys Thr Thr Leu Phe Ile Cys Leu Leu Tyr Ala Gly Gln 965 970 975		
Asn Ala Val Ala Ile Gly Ala Asn Val Trp Leu Ser Ala Trp Thr Asn 980 985 990		
Asp Val Glu Glu His Gly Gln Gln Asn Asn Thr Ser Val Arg Leu Gly 995 1000 1005		
Val Tyr Ala Thr Leu Gly Ile Leu Gln Gly Leu Leu Val Met Leu Ser 1010 1015 1020		
Ala Phe Thr Met Val Val Gly Ala Ile Gln Ala Ala Arg Leu Leu His 1025 1030 1035 1040		
Thr Ala Leu Leu His Asn Gln Ile Arg Ala Pro Gln Ser Phe Phe Asp 1045 1050 1055		
Thr Thr Pro Ser Gly Arg Ile Leu Asn Arg Phe Ser Lys Asp Ile Tyr 1060 1065 1070		
Val Ile His Glu Val Leu Ala Pro Thr Ile Leu Met Leu Phe Asn Ser 1075 1080 1085		
Phe Tyr Thr Ser Ile Ser Thr Ile Val Val Ile Val Ala Ser Thr Pro 1090 1095 1100		
Leu Phe Cys Val Val Val Leu Pro Leu Ala Val Phe Tyr Gly Phe Val 1105 1110 1115 1120		
Gln Arg Phe Tyr Val Ala Thr Ser Arg Gln Leu Lys Arg Leu Glu Ser 1125 1130 1135		
Val Ser Arg Ser Pro Ile Phe Ser His Phe Ser Glu Thr Val Thr Gly 1140 1145 1150		
Thr Ser Val Ile Arg Ala Tyr Gly Arg Val Gln Asp Phe Lys Val Leu 1155 1160 1165		
Ser Asp Ala Lys Val Asp Ser Asn Gln Lys Thr Thr Tyr Pro Tyr Ile 1170 1175 1180		
Ala Ser Asn Arg Trp Leu Gly Val His Val Glu Phe Val Gly Asn Cys 1185 1190 1195 1200		
Val Val Leu Phe Ser Ala Leu Phe Ala Val Ile Gly Arg Asn Ser Leu 1205 1210 1215		
Asn Pro Gly Leu Val Gly Leu Ser Val Ser Tyr Ala Leu Gln Val Thr 1220 1225 1230		
Leu Ser Leu Asn Trp Met Ile Arg Thr Leu Ser Asp Leu Glu Ser Asn		

1235	1240	1245
Ile Ile Ala Val Glu Arg Val Lys Glu Tyr Ser Lys Thr Glu Thr Glu 1250	1255	1260
Ala Pro Trp Val Leu Glu Ser Asn Arg Ala Pro Glu Gly Trp Pro Arg 1265	1270	1275 1280
Ser Gly Val Val Glu Phe Arg Asn Tyr Ser Val Arg Tyr Arg Pro Gly 1285	1290	1295
Leu Glu Leu Val Leu Lys Asn Leu Thr Leu His Val Gln Gly Gly Glu 1300	1305	1310
Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly Lys Ser Ser Met Thr 1315	1320	1325
Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Glu Gly Glu Ile Phe Ile 1330	1335	1340
Asp Gly Leu Asn Val Ala His Ile Gly Leu His Asp Leu Arg Ser Gln 1345	1350	1355 1360
Leu Thr Ile Ile Pro Gln Asp Pro Ile Leu Phe Ser Gly Thr Leu Arg 1365	1370	1375
Met Asn Leu Asp Pro Phe Gly Arg Tyr Ser Asp Glu Asp Ile Trp Arg 1380	1385	1390
Thr Leu Glu Leu Ser His Leu Ser Ala Phe Val Ser Ser Gln Pro Thr 1395	1400	1405
Gly Leu Asp Phe Gln Cys Ser Glu Gly Gly Asp Asn Leu Ser Val Gly 1410	1415	1420
Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Leu Leu Arg Lys Ser Arg 1425	1430	1435 1440
Val Leu Val Leu Asp Glu Ala Thr Ala Ala Ile Asp Leu Glu Thr Asp 1445	1450	1455
Asp Leu Ile Gln Gly Thr Ile Arg Thr Gln Phe Glu Asp Cys Thr Val 1460	1465	1470
Leu Thr Ile Ala His Arg Leu Asn Thr Ile Met Asp Tyr Asn Arg Val 1475	1480	1485
Leu Val Leu Asp Lys Gly Val Val Ala Glu Phe Asp Ser Pro Val Asn 1490	1495	1500
Leu Ile Ala Ala Gly Gly Ile Phe Tyr Gly Met Ala Lys Asp Ala Gly 1505	1510	1515 1520
Leu Ala		

<210> 86
 <211> 1531
 <212> PRT
 <213> Homo sapiens

<400> 86

Met	Ala	Leu	Arg	Gly	Phe	Cys	Ser	Ala	Asp	Gly	Ser	Asp	Pro	Leu	Trp
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Asp	Trp	Asn	Val	Thr	Trp	Asn	Thr	Ser	Asn	Pro	Asp	Phe	Thr	Lys	Cys
		20					25						30		
Phe	Gln	Asn	Thr	Val	Leu	Val	Trp	Val	Pro	Cys	Phe	Tyr	Leu	Trp	Ala
		35					40					45			
Cys	Phe	Pro	Phe	Tyr	Phe	Leu	Tyr	Leu	Ser	Arg	His	Asp	Arg	Gly	Tyr
	50					55					60				
Ile	Gln	Met	Thr	Pro	Leu	Asn	Lys	Thr	Lys	Thr	Ala	Leu	Gly	Phe	Leu
65					70					75					80
Leu	Trp	Ile	Val	Cys	Trp	Ala	Asp	Leu	Phe	Tyr	Ser	Phe	Trp	Glu	Arg
			85					90						95	
Ser	Arg	Gly	Ile	Phe	Leu	Ala	Pro	Val	Phe	Leu	Val	Ser	Pro	Thr	Leu
		100						105					110		
Leu	Gly	Ile	Thr	Thr	Leu	Leu	Ala	Thr	Phe	Leu	Ile	Gln	Leu	Glu	Arg
		115					120					125			
Arg	Lys	Gly	Val	Gln	Ser	Ser	Gly	Ile	Met	Leu	Thr	Phe	Trp	Leu	Val
	130					135					140				
Ala	Leu	Val	Cys	Ala	Leu	Ala	Ile	Leu	Arg	Ser	Lys	Ile	Met	Thr	Ala
145					150				155						160
Leu	Lys	Glu	Asp	Ala	Gln	Val	Asp	Leu	Phe	Arg	Asp	Ile	Thr	Phe	Tyr
			165					170						175	
Val	Tyr	Phe	Ser	Leu	Leu	Leu	Ile	Gln	Leu	Val	Leu	Ser	Cys	Phe	Ser
		180						185					190		
Asp	Arg	Ser	Pro	Leu	Phe	Ser	Glu	Thr	Ile	His	Asp	Pro	Asn	Pro	Cys
		195					200					205			
Pro	Glu	Ser	Ser	Ala	Ser	Phe	Leu	Ser	Arg	Ile	Thr	Phe	Trp	Trp	Ile
	210					215					220				
Thr	Gly	Leu	Ile	Val	Arg	Gly	Tyr	Arg	Gln	Pro	Leu	Glu	Gly	Ser	Asp
225				230					235						240
Leu	Trp	Ser	Leu	Asn	Lys	Glu	Asp	Thr	Ser	Glu	Gln	Val	Val	Pro	Val
			245					250						255	
Leu	Val	Lys	Asn	Trp	Lys	Lys	Glu	Cys	Ala	Lys	Thr	Arg	Lys	Gln	Pro
			260					265						270	

Val	Lys	Val	Val	Tyr	Ser	Ser	Lys	Asp	Pro	Ala	Gln	Pro	Lys	Glu	Ser	275	280	285	
Ser	Lys	Val	Asp	Ala	Asn	Glu	Glu	Val	Glu	Ala	Leu	Ile	Val	Lys	Ser	290	295	300	
Pro	Gln	Lys	Glu	Trp	Asn	Pro	Ser	Leu	Phe	Lys	Val	Leu	Tyr	Lys	Thr	305	310	315	320
Phe	Gly	Pro	Tyr	Phe	Leu	Met	Ser	Phe	Phe	Phe	Lys	Ala	Ile	His	Asp	325	330	335	
Leu	Met	Met	Phe	Ser	Gly	Pro	Gln	Ile	Leu	Lys	Leu	Leu	Ile	Lys	Phe	340	345	350	
Val	Asn	Asp	Thr	Lys	Ala	Pro	Asp	Trp	Gln	Gly	Tyr	Phe	Tyr	Thr	Val	355	360	365	
Leu	Leu	Phe	Val	Thr	Ala	Cys	Leu	Gln	Thr	Leu	Val	Leu	His	Gln	Tyr	370	375	380	
Phe	His	Ile	Cys	Phe	Val	Ser	Gly	Met	Arg	Ile	Lys	Thr	Ala	Val	Ile	385	390	395	400
Gly	Ala	Val	Tyr	Arg	Lys	Ala	Leu	Val	Ile	Thr	Asn	Ser	Ala	Arg	Lys	405	410	415	
Ser	Ser	Thr	Val	Gly	Glu	Ile	Val	Asn	Leu	Met	Ser	Val	Asp	Ala	Gln	420	425	430	
Arg	Phe	Met	Asp	Leu	Ala	Thr	Tyr	Ile	Asn	Met	Ile	Trp	Ser	Ala	Pro	435	440	445	
Leu	Gln	Val	Ile	Leu	Ala	Leu	Tyr	Leu	Leu	Trp	Leu	Asn	Leu	Gly	Pro	450	455	460	
Ser	Val	Leu	Ala	Gly	Val	Ala	Val	Met	Val	Leu	Met	Val	Pro	Val	Asn	465	470	475	480
Ala	Val	Met	Ala	Met	Lys	Thr	Lys	Thr	Tyr	Gln	Val	Ala	His	Met	Lys	485	490	495	
Ser	Lys	Asp	Asn	Arg	Ile	Lys	Leu	Met	Asn	Glu	Ile	Leu	Asn	Gly	Ile	500	505	510	
Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Leu	Ala	Phe	Lys	Asp	Lys	Val	515	520	525	
Leu	Ala	Ile	Arg	Gln	Glu	Glu	Leu	Lys	Val	Leu	Lys	Lys	Ser	Ala	Tyr	530	535	540	
Leu	Ser	Ala	Val	Gly	Thr	Phe	Thr	Trp	Val	Cys	Thr	Pro	Phe	Leu	Val	545	550	555	560
Ala	Leu	Cys	Thr	Phe	Ala	Val	Tyr	Val	Thr	Ile	Asp	Glu	Asn	Asn	Ile	565	570	575	

Leu	Asp	Ala	Gln	Thr	Ala	Phe	Val	Ser	Leu	Ala	Leu	Phe	Asn	Ile	Leu	
			580					585					590			
Arg	Phe	Pro	Leu	Asn	Ile	Leu	Pro	Met	Val	Ile	Ser	Ser	Ile	Val	Gln	
		595					600					605				
Ala	Ser	Val	Ser	Leu	Lys	Arg	Leu	Arg	Ile	Phe	Leu	Ser	His	Glu	Glu	
	610					615					620					
Leu	Glu	Pro	Asp	Ser	Ile	Glu	Arg	Arg	Pro	Val	Lys	Asp	Gly	Gly	Gly	
625					630					635					640	
Thr	Asn	Ser	Ile	Thr	Val	Arg	Asn	Ala	Thr	Phe	Thr	Trp	Ala	Arg	Ser	
			645						650					655		
Asp	Pro	Pro	Thr	Leu	Asn	Gly	Ile	Thr	Phe	Ser	Ile	Pro	Glu	Gly	Ala	
			660					665					670			
Leu	Val	Ala	Val	Val	Gly	Gln	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Leu	
	675						680					685				
Ser	Ala	Leu	Leu	Ala	Glu	Met	Asp	Lys	Val	Glu	Gly	His	Val	Ala	Ile	
	690					695					700					
Lys	Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Asp	
705					710					715					720	
Ser	Leu	Arg	Glu	Asn	Ile	Leu	Phe	Gly	Cys	Gln	Leu	Glu	Glu	Pro	Tyr	
			725					730						735		
Tyr	Arg	Ser	Val	Ile	Gln	Ala	Cys	Ala	Leu	Leu	Pro	Asp	Leu	Glu	Ile	
			740					745					750			
Leu	Pro	Ser	Gly	Asp	Arg	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Val	Asn	Leu	
		755					760					765				
Ser	Gly	Gly	Gln	Lys	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser	
	770					775					780					
Asn	Ala	Asp	Ile	Tyr	Leu	Phe	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ala	
785					790					795					800	
His	Val	Gly	Lys	His	Ile	Phe	Glu	Asn	Val	Ile	Gly	Pro	Lys	Gly	Met	
			805					810						815		
Leu	Lys	Asn	Lys	Thr	Arg	Ile	Leu	Val	Thr	His	Ser	Met	Ser	Tyr	Leu	
		820						825					830			
Pro	Gln	Val	Asp	Val	Ile	Ile	Val	Met	Ser	Gly	Gly	Lys	Ile	Ser	Glu	
		835					840					845				
Met	Gly	Ser	Tyr	Gln	Glu	Leu	Leu	Ala	Arg	Asp	Gly	Ala	Phe	Ala	Glu	
	850					855					860					
Phe	Leu	Arg	Thr	Tyr	Ala	Ser	Thr	Glu	Gln	Glu	Gln	Asp	Ala	Glu	Glu	
865					870					875				880		

Asn	Gly	Val	Thr	Gly	Val	Ser	Gly	Pro	Gly	Lys	Glu	Ala	Lys	Gln	Met		
				885					890					895			
Glu	Asn	Gly	Met	Leu	Val	Thr	Asp	Ser	Ala	Gly	Lys	Gln	Leu	Gln	Arg		
			900					905					910				
Gln	Leu	Ser	Ser	Ser	Ser	Ser	Tyr	Ser	Gly	Asp	Ile	Ser	Arg	His	His		
		915					920					925					
Asn	Ser	Thr	Ala	Glu	Leu	Gln	Lys	Ala	Glu	Ala	Lys	Lys	Glu	Glu	Thr		
		930				935					940						
Trp	Lys	Leu	Met	Glu	Ala	Asp	Lys	Ala	Gln	Thr	Gly	Gln	Val	Lys	Leu		
945					950					955					960		
Ser	Val	Tyr	Trp	Asp	Tyr	Met	Lys	Ala	Ile	Gly	Leu	Phe	Ile	Ser	Phe		
				965					970					975			
Leu	Ser	Ile	Phe	Leu	Phe	Met	Cys	Asn	His	Val	Ser	Ala	Leu	Ala	Ser		
			980					985					990				
Asn	Tyr	Trp	Leu	Ser	Leu	Trp	Thr	Asp	Asp	Pro	Ile	Val	Asn	Gly	Thr		
		995				1000						1005					
Gln	Glu	His	Thr	Lys	Val	Arg	Leu	Ser	Val	Tyr	Gly	Ala	Leu	Gly	Ile		
		1010				1015					1020						
Ser	Gln	Gly	Ile	Ala	Val	Phe	Gly	Tyr	Ser	Met	Ala	Val	Ser	Ile	Gly		
1025					1030					1035					1040		
Gly	Ile	Leu	Ala	Ser	Arg	Cys	Leu	His	Val	Asp	Leu	Leu	His	Ser	Ile		
				1045					1050					1055			
Leu	Arg	Ser	Pro	Met	Ser	Phe	Phe	Glu	Arg	Thr	Pro	Ser	Gly	Asn	Leu		
			1060					1065					1070				
Val	Asn	Arg	Phe	Ser	Lys	Glu	Leu	Asp	Thr	Val	Asp	Ser	Met	Ile	Pro		
		1075					1080					1085					
Glu	Val	Ile	Lys	Met	Phe	Met	Gly	Ser	Leu	Phe	Asn	Val	Ile	Gly	Ala		
		1090				1095					1100						
Cys	Ile	Val	Ile	Leu	Leu	Ala	Thr	Pro	Ile	Ala	Ala	Ile	Ile	Ile	Pro		
1105					1110					1115					1120		
Pro	Leu	Gly	Leu	Ile	Tyr	Phe	Phe	Val	Gln	Arg	Phe	Tyr	Val	Ala	Ser		
			1125					1130					1135				
Ser	Arg	Gln	Leu	Lys	Arg	Leu	Glu	Ser	Val	Ser	Arg	Ser	Pro	Val	Tyr		
			1140				1145						1150				
Ser	His	Phe	Asn	Glu	Thr	Leu	Leu	Gly	Val	Ser	Val	Ile	Arg	Ala	Phe		
		1155					1160					1165					
Glu	Glu	Gln	Glu	Arg	Phe	Ile	His	Gln	Ser	Asp	Leu	Lys	Val	Asp	Glu		
		1170				1175					1180						

Asn Gln Lys Ala Tyr Tyr Pro Ser Ile Val Ala Asn Arg Trp Leu Ala
 1185 1190 1195 1200

Val Arg Leu Glu Cys Val Gly Asn Cys Ile Val Leu Phe Ala Ala Leu
 1205 1210 1215

Phe Ala Val Ile Ser Arg His Ser Leu Ser Ala Gly Leu Val Gly Leu
 1220 1225 1230

Ser Val Ser Tyr Ser Leu Gln Val Thr Thr Tyr Leu Asn Trp Leu Val
 1235 1240 1245

Arg Met Ser Ser Glu Met Glu Thr Asn Ile Val Ala Val Glu Arg Leu
 1250 1255 1260

Lys Glu Tyr Ser Glu Thr Glu Lys Glu Ala Pro Trp Gln Ile Gln Glu
 1265 1270 1275 1280

Thr Ala Pro Pro Ser Ser Trp Pro Gln Val Gly Arg Val Glu Phe Arg
 1285 1290 1295

Asn Tyr Cys Leu Arg Tyr Arg Glu Asp Leu Asp Phe Val Leu Arg His
 1300 1305 1310

Ile Asn Val Thr Ile Asn Gly Gly Glu Lys Val Gly Ile Val Gly Arg
 1315 1320 1325

Thr Gly Ala Gly Lys Ser Ser Leu Thr Leu Gly Leu Phe Arg Ile Asn
 1330 1335 1340

Glu Ser Ala Glu Gly Glu Ile Ile Ile Asp Gly Ile Asn Ile Ala Lys
 1345 1350 1355 1360

Ile Gly Leu His Asp Leu Arg Phe Lys Ile Thr Ile Ile Pro Gln Asp
 1365 1370 1375

Pro Val Leu Phe Ser Gly Ser Leu Arg Met Asn Leu Asp Pro Phe Ser
 1380 1385 1390

Gln Tyr Ser Asp Glu Glu Val Trp Thr Ser Leu Glu Leu Ala His Leu
 1395 1400 1405

Lys Asp Phe Val Ser Ala Leu Pro Asp Lys Leu Asp His Glu Cys Ala
 1410 1415 1420

Glu Gly Gly Glu Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu
 1425 1430 1435 1440

Ala Arg Ala Leu Leu Arg Lys Thr Lys Ile Leu Val Leu Asp Glu Ala
 1445 1450 1455

Thr Ala Ala Val Asp Leu Glu Thr Asp Asp Leu Ile Gln Ser Thr Ile
 1460 1465 1470

Arg Thr Gln Phe Glu Asp Cys Thr Val Leu Thr Ile Ala His Arg Leu
 1475 1480 1485

Asn Thr Ile Met Asp Tyr Thr Arg Val Ile Val Leu Asp Lys Gly Glu
 1490 1495 1500

Ile Gln Glu Tyr Gly Ala Pro Ser Asp Leu Leu Gln Gln Arg Gly Leu
 1505 1510 1515 1520

Phe Tyr Ser Met Ala Lys Asp Ala Gly Leu Val
 1525 1530

<210> 87
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 <213> Homo sapiens

<400> 87
 Asp Trp Asn Val Thr Trp Asn Thr Ser Asn Pro Asp Phe Thr Lys Cys
 1 5 10 15

Phe Gln Asn Thr Val Leu Val Trp Val Pro Cys Phe Tyr Leu Trp Ala
 20 25 30

Cys Phe Pro Phe Tyr Phe Leu Tyr Leu Ser Arg His Asp Arg Gly Tyr
 35 40 45

Ile Gln Met Thr Pro Leu Asn Lys Thr Lys Thr Ala Leu Gly Phe Leu
 50 55 60

Leu Trp Ile Val Cys Trp Ala Asp Leu Phe Tyr Ser Phe Trp Glu Arg
 65 70 75 80

Ser Arg Gly Ile Phe Leu Ala Pro Val Phe Leu Val Ser Pro Thr Leu
 85 90 95

Leu Gly Ile Thr Thr Leu Leu Ala Thr Phe Leu Ile Gln Leu Glu Arg
 100 105 110

Arg Lys Gly Val Gln Ser Ser Gly Ile Met Leu Thr Phe Trp Leu Val
 115 120 125

Ala Leu Val Cys Ala Leu Ala Ile Leu Arg Ser Lys Ile Met Thr Ala
 130 135 140

Leu Lys Glu Asp Ala Gln Val Asp Leu Phe Arg Asp Ile Thr Phe Tyr
 145 150 155 160

Val Tyr Phe Ser Leu Leu Leu Ile Gln Leu Val Leu Ser Cys Phe Ser
 165 170 175

Asp Arg Ser Pro Leu Phe Ser Glu Thr Ile His Asp Pro Asn Pro Cys
 180 185 190

Pro Glu Ser Ser Ala Ser Phe Leu Ser Arg Ile Thr Phe Trp Trp Ile
 195 200 205

Thr Gly Leu Ile Val Arg Gly Tyr Arg Gln Pro Leu Glu Gly Ser Asp
 210 215 220

Leu	Trp	Ser	Leu	Asn	Lys	Glu	Asp	Thr	Ser	Glu	Gln	Val	Val	Pro	Val	225	230	235	240
Leu	Val	Lys	Asn	Trp	Lys	Lys	Glu	Cys	Ala	Lys	Thr	Arg	Lys	Gln	Pro	245	250	255	
Val	Lys	Val	Val	Tyr	Ser	Ser	Lys	Asp	Pro	Ala	Gln	Pro	Lys	Glu	Ser	260	265	270	
Ser	Lys	Val	Asp	Ala	Asn	Glu	Glu	Val	Glu	Ala	Leu	Ile	Val	Lys	Ser	275	280	285	
Pro	Gln	Lys	Glu	Trp	Asn	Pro	Ser	Leu	Phe	Lys	Val	Leu	Tyr	Lys	Thr	290	295	300	
Phe	Gly	Pro	Tyr	Phe	Leu	Met	Ser	Phe	Phe	Phe	Lys	Ala	Ile	His	Asp	305	310	315	320
Leu	Met	Met	Phe	Ser	Gly	Pro	Gln	Ile	Leu	Lys	Leu	Leu	Ile	Lys	Phe	325	330	335	
Val	Asn	Asp	Thr	Lys	Ala	Pro	Asp	Trp	Gln	Gly	Tyr	Phe	Tyr	Thr	Val	340	345	350	
Leu	Leu	Phe	Val	Thr	Ala	Cys	Leu	Gln	Thr	Leu	Val	Leu	His	Gln	Tyr	355	360	365	
Phe	His	Ile	Cys	Phe	Val	Ser	Gly	Met	Arg	Ile	Lys	Thr	Ala	Val	Ile	370	375	380	
Gly	Ala	Val	Tyr	Arg	Lys	Ala	Leu	Val	Ile	Thr	Asn	Ser	Ala	Arg	Lys	385	390	395	400
Ser	Ser	Thr	Val	Gly	Glu	Ile	Val	Asn	Leu	Met	Ser	Val	Asp	Ala	Gln	405	410	415	
Arg	Phe	Met	Asp	Leu	Ala	Thr	Tyr	Ile	Asn	Met	Ile	Trp	Ser	Ala	Pro	420	425	430	
Leu	Gln	Val	Ile	Leu	Ala	Leu	Tyr	Leu	Leu	Trp	Leu	Asn	Leu	Gly	Pro	435	440	445	
Ser	Val	Leu	Ala	Gly	Val	Ala	Val	Met	Val	Leu	Met	Val	Pro	Val	Asn	450	455	460	
Ala	Val	Met	Ala	Met	Lys	Thr	Lys	Thr	Tyr	Gln	Val	Ala	His	Met	Lys	465	470	475	480
Ser	Lys	Asp	Asn	Arg	Ile	Lys	Leu	Met	Asn	Glu	Ile	Leu	Asn	Gly	Ile	485	490	495	
Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Leu	Ala	Phe	Lys	Asp	Lys	Val	500	505	510	
Leu	Ala	Ile	Arg	Gln	Glu	Glu	Leu	Lys	Val	Leu	Lys	Lys	Ser	Ala	Tyr	515	520	525	

Leu	Ser	Ala	Val	Gly	Thr	Phe	Thr	Trp	Val	Cys	Thr	Pro	Phe	Leu	Val
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Ala	Leu	Cys	Thr	Phe	Ala	Val	Tyr	Val	Thr	Ile	Asp	Glu	Asn	Asn	Ile
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Leu	Asp	Ala	Gln	Thr	Ala	Phe	Val	Ser	Leu	Ala	Leu	Phe	Asn	Ile	Leu
			565						570					575	
Arg	Phe	Pro	Leu	Asn	Ile	Leu	Pro	Met	Val	Ile	Ser	Ser	Ile	Val	Gln
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Ala	Ser	Val	Ser	Leu	Lys	Arg	Leu	Arg	Ile	Phe	Leu	Ser	His	Glu	Glu
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Leu	Glu	Pro	Asp	Ser	Ile	Glu	Arg	Arg	Pro	Val	Lys	Asp	Gly	Gly	Gly
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Thr	Asn	Ser	Ile	Thr	Val	Arg	Asn	Ala	Thr	Phe	Thr	Trp	Ala	Arg	Ser
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Asp	Pro	Pro	Thr	Leu	Asn	Gly	Ile	Thr	Phe	Ser	Ile	Pro	Glu	Gly	Ala
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Leu	Val	Ala	Val	Val	Gly	Gln	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Leu
			660					665					670		
Ser	Ala	Leu	Leu	Ala	Glu	Met	Asp	Lys	Val	Glu	Gly	His	Val	Ala	Ile
		675					680					685			
Lys	Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Asp
	690					695					700				
Ser	Leu	Arg	Glu	Asn	Ile	Leu	Phe	Gly	Cys	Gln	Leu	Glu	Glu	Pro	Tyr
705					710					715					720
Tyr	Arg	Ser	Val	Ile	Gln	Ala	Cys	Ala	Leu	Leu	Pro	Asp	Leu	Glu	Ile
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Leu	Pro	Ser	Gly	Asp	Arg	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Val	Asn	Leu
			740					745					750		
Ser	Gly	Gly	Gln	Lys	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser
		755					760					765			
Asn	Ala	Asp	Ile	Tyr	Leu	Phe	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ala
		770				775						780			
His	Val	Gly	Lys	His	Ile	Phe	Glu	Asn	Val	Ile	Gly	Pro	Lys	Gly	Met
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Leu	Lys	Asn	Lys	Thr	Arg	Ile	Leu	Val	Thr	His	Ser	Met	Ser	Tyr	Leu
				805					810					815	
Pro	Gln	Val	Asp	Val	Ile	Ile	Val	Met	Ser	Gly	Gly	Lys	Ile	Ser	Glu
			820					825					830		

Met Gly Ser Tyr Gln Glu Leu Leu Ala Arg Asp Gly Ala Phe Ala Glu
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 Phe Leu Arg Thr Tyr Ala Ser Thr Glu Gln Glu Gln Asp Ala Glu Glu
 850 855 860
 Asn Gly Val Thr Gly Val Ser Gly Pro Gly Lys Glu Ala Lys Gln Met
 865 870 875 880
 Glu Asn Gly Met Leu Val Thr Asp Ser Ala Gly Lys Gln Leu Gln Arg
 885 890 895
 Gln Leu Ser Ser Ser Ser Ser Tyr Ser Gly Asp Ile Ser Arg His His
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 Asn Ser Thr Ala Glu Leu Gln Lys Ala Glu Ala Lys Lys Glu Glu Thr
 915 920 925
 Trp Lys Leu Met Glu Ala Asp Lys Ala Gln Thr Gly Gln Val Lys Leu
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 Ser Val Tyr Trp Asp Tyr Met Lys Ala Ile Gly Leu Phe Ile Ser Phe
 945 950 955 960
 Leu Ser Ile Phe Leu Phe Met Cys Asn His Val Ser Ala Leu Ala Ser
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 980 985 990
 Gln Glu His Thr Lys Val Arg Leu Ser Val Tyr Gly Ala Leu Gly Ile
 995 1000 1005
 Ser Gln Gly Ile Ala Val Phe Gly Tyr Ser Met Ala Val Ser Ile Gly
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 Val Asn Arg Phe Ser Lys Glu Leu Asp Thr Val Asp Ser Met Ile Pro
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 Glu Val Ile Lys Met Phe Met Gly Ser Leu Phe Asn Val Ile Gly Ala
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 Cys Ile Val Ile Leu Leu Ala Thr Pro Ile Ala Ala Ile Ile Ile Pro
 1090 1095 1100
 Pro Leu Gly Leu Ile Tyr Phe Phe Val Gln Arg Phe Tyr Val Ala Ser
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 Ser Arg Gln Leu Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Val Tyr
 1125 1130 1135

Ser His Phe Asn Glu Thr Leu Leu Gly Val Ser Val Ile Arg Ala Phe
 1140 1145 1150
 Glu Glu Gln Glu Arg Phe Ile His Gln Ser Asp Leu Lys Val Asp Glu
 1155 1160 1165
 Asn Gln Lys Ala Tyr Tyr Pro Ser Ile Val Ala Asn Arg Trp Leu Ala
 1170 1175 1180
 Val Arg Leu Glu Cys Val Gly Asn Cys Ile Val Leu Phe Ala Ala Leu
 1185 1190 1195 1200
 Phe Ala Val Ile Ser Arg His Ser Leu Ser Ala Gly Leu Val Gly Leu
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 Ser Val Ser Tyr Ser Leu Gln Val Thr Thr Tyr Leu Asn Trp Leu Val
 1220 1225 1230
 Arg Met Ser Ser Glu Met Glu Thr Asn Ile Val Ala Val Glu Arg Leu
 1235 1240 1245
 Lys Glu Tyr Ser Glu Thr Glu Lys Glu Ala Pro Trp Gln Ile Gln Glu
 1250 1255 1260
 Thr Ala Pro Pro Ser Ser Trp Pro Gln Val Gly Arg Val Glu Phe Arg
 1265 1270 1275 1280
 Asn Tyr Cys Leu Arg Tyr Arg Glu Asp Leu Asp Phe Val Leu Arg His
 1285 1290 1295
 Ile Asn Val Thr Ile Asn Gly Gly Glu Lys Val Gly Ile Val Gly Arg
 1300 1305 1310
 Thr Gly Ala Gly Lys Ser Ser Leu Thr Leu Gly Leu Phe Arg Ile Asn
 1315 1320 1325
 Glu Ser Ala Glu Gly Glu Ile Ile Ile Asp Gly Ile Asn Ile Ala Lys
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 Ile Gly Leu His Asp Leu Arg Phe Lys Ile Thr Ile Ile Pro Gln Asp
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 Pro Val Leu Phe Ser Gly Ser Leu Arg Met Asn Leu Asp Pro Phe Ser
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 Gln Tyr Ser Asp Glu Glu Val Trp Thr Ser Leu Glu Leu Ala His Leu
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 Lys Asp Phe Val Ser Ala Leu Pro Asp Lys Leu Asp His Glu Cys Ala
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 Glu Gly Gly Glu Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu
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 Ala Arg Ala Leu Leu Arg Lys Thr Lys Ile Leu Val Leu Asp Glu Ala
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Thr Ala Ala Val Asp Leu Glu Thr Asp Asp Leu Ile Gln Ser Thr Ile
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Arg Thr Gln Phe Glu Asp Cys Thr Val Leu Thr Ile Ala His Arg Leu
1460 1465 1470

Asn Thr Ile Met Asp Tyr Thr Arg Val Ile Val Leu Asp Lys Gly Glu
1475 1480 1485

Ile Gln Glu Tyr Gly Ala Pro Ser Asp Leu Leu Gln Gln Arg Gly Leu
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Phe Tyr Ser Met Ala Lys Asp Ala Gly Leu Val
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Phe Gln Asn Thr Val Leu Thr Trp Val Pro Cys Phe Tyr Leu Trp Ser
35 40 45

Cys Phe Pro Leu Tyr Phe Phe Tyr Leu Ser Arg His Asp Arg Gly Tyr
50 55 60

Ile Gln Met Thr His Leu Asn Lys Thr Lys Thr Ala Leu Gly Phe Phe
65 70 75 80

Leu Trp Ile Ile Cys Trp Ala Asp Leu Phe Tyr Ser Phe Trp Glu Arg
85 90 95

Ser Gln Gly Val Leu Arg Ala Pro Val Leu Leu Val Ser Pro Thr Leu
100 105 110

Leu Gly Ile Thr Met Leu Leu Ala Thr Phe Leu Ile Gln Leu Glu Arg
115 120 125

Arg Lys Gly Val Gln Ser Ser Gly Ile Met Leu Thr Phe Trp Leu Val
130 135 140

Ala Leu Leu Cys Ala Leu Ala Ile Leu Arg Ser Lys Ile Ile Ser Ala
145 150 155 160

Leu Lys Lys Asp Ala His Val Asp Val Phe Arg Asp Ser Thr Phe Tyr
165 170 175

Leu Tyr Phe Thr Leu Val Leu Val Gln Leu Val Leu Ser Cys Phe Ser

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Asp	Cys	Ser	Pro	Leu	Phe	Ser	Glu	Thr	Val	His	Asp	Arg	Asn	Pro	Cys
	195						200					205			
Pro	Glu	Ser	Ser	Ala	Ser	Phe	Leu	Ser	Arg	Ile	Thr	Phe	Trp	Trp	Ile
	210					215					220				
Thr	Gly	Met	Met	Val	His	Gly	Tyr	Arg	Gln	Pro	Leu	Glu	Ser	Ser	Asp
	225					230					235				240
Leu	Trp	Ser	Leu	Asn	Lys	Glu	Asp	Thr	Ser	Glu	Glu	Val	Val	Pro	Val
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Leu	Val	Asn	Asn	Trp	Lys	Lys	Glu	Cys	Asp	Lys	Ser	Arg	Lys	Gln	Pro
			260						265					270	
Val	Arg	Ile	Val	Tyr	Ala	Pro	Pro	Lys	Asp	Pro	Ser	Lys	Pro	Lys	Gly
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Ser	Ser	Gln	Leu	Asp	Val	Asn	Glu	Glu	Val	Glu	Ala	Leu	Ile	Val	Lys
	290					295					300				
Ser	Pro	His	Lys	Asp	Arg	Glu	Pro	Ser	Leu	Phe	Lys	Val	Leu	Tyr	Lys
	305					310					315				320
Thr	Phe	Gly	Pro	Tyr	Phe	Leu	Met	Ser	Phe	Leu	Tyr	Lys	Ala	Leu	His
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Asp	Leu	Met	Met	Phe	Ala	Gly	Pro	Lys	Ile	Leu	Glu	Leu	Ile	Ile	Asn
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Phe	Val	Asn	Asp	Arg	Glu	Ala	Pro	Asp	Trp	Gln	Gly	Tyr	Phe	Tyr	Thr
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Ala	Leu	Leu	Phe	Val	Ser	Ala	Cys	Leu	Gln	Thr	Leu	Ala	Leu	His	Gln
	370					375					380				
Tyr	Phe	His	Ile	Cys	Phe	Val	Ser	Gly	Met	Arg	Ile	Lys	Thr	Ala	Val
	385					390					395				400
Val	Gly	Ala	Val	Tyr	Arg	Lys	Ala	Leu	Leu	Ile	Thr	Asn	Ala	Ala	Arg
				405				410					415		
Lys	Ser	Ser	Thr	Val	Gly	Glu	Ile	Val	Asn	Leu	Met	Ser	Val	Asp	Ala
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Gln	Arg	Phe	Met	Asp	Leu	Ala	Thr	Tyr	Ile	Asn	Met	Ile	Trp	Ser	Ala
		435					440					445			
Pro	Leu	Gln	Val	Ile	Leu	Ala	Leu	Tyr	Phe	Leu	Trp	Leu	Ser	Leu	Gly
	450					455					460				
Pro	Ser	Val	Leu	Ala	Gly	Val	Ala	Val	Met	Ile	Leu	Met	Val	Pro	Leu
	465					470					475			480	
Asn	Ala	Val	Met	Ala	Met	Lys	Thr	Lys	Thr	Tyr	Gln	Val	Ala	His	Met

485					490					495					
Lys	Ser	Lys	Asp	Asn	Arg	Ile	Lys	Leu	Met	Asn	Glu	Ile	Leu	Asn	Gly
			500					505					510		
Ile	Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Leu	Ala	Phe	Gln	Asp	Lys
		515					520					525			
Val	Met	Ser	Ile	Arg	Gln	Glu	Glu	Leu	Lys	Val	Leu	Lys	Lys	Ser	Ala
	530					535					540				
Tyr	Leu	Ala	Ala	Val	Gly	Thr	Phe	Thr	Trp	Val	Cys	Thr	Pro	Phe	Leu
545						550					555				560
Val	Ala	Leu	Ser	Thr	Phe	Ala	Val	Phe	Val	Thr	Val	Asp	Glu	Arg	Asn
				565					570					575	
Ile	Leu	Asp	Ala	Lys	Lys	Ala	Phe	Val	Ser	Leu	Ala	Leu	Phe	Asn	Ile
			580					585					590		
Leu	Arg	Phe	Pro	Leu	Asn	Ile	Leu	Pro	Met	Val	Ile	Ser	Ser	Ile	Val
		595					600					605			
Gln	Ala	Ser	Val	Ser	Leu	Lys	Arg	Leu	Arg	Ile	Phe	Leu	Ser	His	Glu
	610					615					620				
Glu	Leu	Glu	Pro	Asp	Ser	Ile	Glu	Arg	Arg	Ser	Ile	Lys	Ser	Gly	Glu
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Gly	Asn	Ser	Ile	Thr	Val	Lys	Asn	Ala	Thr	Phe	Thr	Trp	Ala	Arg	Gly
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Glu	Pro	Pro	Thr	Leu	Asn	Gly	Ile	Thr	Phe	Ser	Ile	Pro	Glu	Gly	Ala
			660					665					670		
Leu	Val	Ala	Val	Val	Gly	Gln	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Leu
		675					680					685			
Ser	Ala	Leu	Leu	Ala	Glu	Met	Asp	Lys	Val	Glu	Gly	His	Val	Thr	Leu
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Lys	Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Asp
705						710					715				720
Ser	Leu	Arg	Glu	Asn	Ile	Leu	Phe	Gly	His	Pro	Leu	Gln	Glu	Asn	Tyr
				725					730					735	
Tyr	Lys	Ala	Val	Met	Glu	Ala	Cys	Ala	Leu	Leu	Pro	Asp	Leu	Glu	Ile
			740					745					750		
Leu	Pro	Ser	Gly	Asp	Arg	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Val	Asn	Leu
		755					760					765			
Ser	Gly	Gly	Gln	Lys	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser
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Asn	Ser	Asp	Ile	Tyr	Leu	Phe	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ala

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His Val Gly Lys	His Ile Phe Glu Lys	Val Val Gly Pro Met Gly Leu				
	805	810			815	
Leu Lys Asn Lys Thr Arg Ile Leu Val Thr His Gly Ile Ser Tyr Leu						
	820	825			830	
Pro Gln Val Asp Val Ile Ile Val Met Ser Gly Gly Lys Ile Ser Glu						
	835	840			845	
Met Gly Ser Tyr Gln Glu Leu Leu Asp Arg Asp Gly Ala Phe Ala Glu						
	850	855			860	
Phe Leu Arg Thr Tyr Ala Asn Ala Glu Gln Asp Leu Ala Ser Glu Asp						
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Asp Ser Val Ser Gly Ser Gly Lys Glu Ser Lys Pro Val Glu Asn Gly						
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Met Leu Val Thr Asp Thr Val Gly Lys His Leu Gln Arg His Leu Ser						
	900	905				910
Asn Ser Ser Ser His Ser Gly Asp Thr Ser Gln Gln His Ser Ser Ile						
	915	920				925
Ala Glu Leu Gln Lys Ala Gly Ala Lys Glu Glu Thr Trp Lys Leu Met						
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Glu Ala Asp Lys Ala Gln Thr Gly Gln Val Gln Leu Ser Val Tyr Trp						
	945	950			955	960
Asn Tyr Met Lys Ala Ile Gly Leu Phe Ile Thr Phe Leu Ser Ile Phe						
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Leu Phe Leu Cys Asn His Val Ser Ala Leu Ala Ser Asn Tyr Trp Leu						
	980	985				990
Ser Leu Trp Thr Asp Asp Pro Pro Val Val Asn Gly Thr Gln Ala Asn						
	995	1000			1005	
Arg Asn Phe Arg Leu Ser Val Tyr Gly Ala Leu Gly Ile Leu Gln Gly						
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Ala Ala Ile Phe Gly Tyr Ser Met Ala Val Ser Ile Gly Gly Ile Phe						
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Ala Ser Arg Arg Leu His Leu Asp Leu Leu Tyr Asn Val Leu Arg Ser						
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Pro Met Ser Phe Phe Glu Arg Thr Pro Ser Gly Asn Leu Val Asn Arg						
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Phe Ser Lys Glu Leu Asp Thr Val Asp Ser Met Ile Pro Gln Val Ile						
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Lys Met Phe Met Gly Ser Leu Phe Ser Val Ile Gly Ala Val Ile Ile						

1395	1400	1405
Val Ser Ala Leu Pro Asp Lys Leu Asn His Glu Cys Ala Glu Gly Gly		
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Leu Leu Arg Lys Thr Lys Ile Leu Val Leu Asp Glu Ala Thr Ala Ala		
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Val Asp Leu Glu Thr Asp Asn Leu Ile Gln Ser Thr Ile Arg Thr Gln		
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Phe Glu Asp Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile		
	1475	1480 1485
Met Asp Tyr Thr Arg Val Ile Val Leu Asp Lys Gly Glu Val Arg Glu		
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 <213> Homo sapiens

<400> 89

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 Ala Ala His Gln Pro Phe Pro Arg Pro Arg Phe Arg Gln Glu Thr Gly
 35 40 45
 His Pro Ser Leu Gln Arg Asp Phe Pro Arg Ser Phe Leu Leu Asp Leu
 50 55 60
 Pro Asn Phe Pro Asp Leu Ser Lys Ala Asp Ile Asn Gly Gln Asn Pro
 65 70 75 80
 Asn Ile Gln Val Thr Ile Glu Val Val Asp Gly Pro Asp Ser Glu Ala
 85 90 95
 Asp Lys Asp Gln His Pro Glu Asn Lys Pro Ser Trp Ser Val Pro Ser
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 Pro Asp Trp Arg Ala Trp Trp Gln Arg Ser Leu Ser Leu Ala Arg Ala
 115 120 125
 Asn Ser Gly Asp Gln Asp Tyr Lys Tyr Asp Ser Thr Ser Asp Asp Ser
 130 135 140
 Asn Phe Leu Asn Pro Pro Arg Gly Trp Asp His Thr Ala Pro Gly His
 145 150 155 160
 Arg Thr Phe Glu Thr Lys Asp Gln Pro Glu Tyr Asp Ser Thr Asp Gly
 165 170 175
 Glu Gly Asp Trp Ser Leu Trp Ser Val Cys Ser Val Thr Cys Gly Asn
 180 185 190
 Gly Asn Gln Lys Arg Thr Arg Ser Cys Gly Tyr Ala Cys Thr Ala Thr
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 Glu Ser Arg Thr Cys Asp Arg Pro Asn Cys Pro Ala Cys Thr Gly Phe
 210 215 220
 Leu Ile Val Lys Glu Ala Trp Leu Gly Val Val Val Trp His Val Pro

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Ala Pro Pro Thr Gly Asn Pro Ser Val Pro Leu Pro Glu Val Phe Leu						
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Trp Thr Arg Ala Gln Leu Arg Met Asn Ala Gln Gly Ile Pro Ser Trp						
	260			265		270
Lys Ser Arg Thr Ser Pro Leu Ser Val Met Asn Gly Ser Trp Trp Ile						
	275			280		285
Lys Thr Gln Ile Pro Ile Asn Lys Asn Lys Ser Gly Leu Ser Lys Glu						
	290			295		300
Arg Ile Tyr Ser Lys Asp Tyr Cys Arg Glu Ala Arg Asp Val Ile Ser						
	305			310		315
Leu Leu Leu Gln Trp Asp Glu Arg Cys Asp His Lys Ile Cys Lys His						
	325			330		335
Leu Lys Glu Gln Pro Gly Val Thr Cys Ser Leu Lys His Leu Leu Trp						
	340			345		350
Ala Gly Cys Thr Arg Gly Glu Arg Val Ser Leu Trp Pro Phe Pro Asp						
	355			360		365
Thr Asp Ser Cys Glu Arg Trp Met Ser Phe Lys Ala Arg Phe Leu Lys						
	370			375		380
Lys Tyr Met His Lys Val Met Asn Asp Leu Pro Ser Cys Pro Cys Ser						
	385			390		395
Tyr Pro Thr Glu Val Ala Tyr Ser Thr Ala Asp Ile Phe Asp Arg Ile						
	405			410		415
Lys Arg Lys Asp Phe Arg Trp Lys Asp Ala Ser Gly Pro Lys Glu Lys						
	420			425		430
Leu Glu Ile Tyr Lys Pro Thr Ala Arg Tyr Cys Ile Arg Ser Met Leu						
	435			440		445
Ser Leu Glu Ser Thr Thr Leu Ala Ala Gln His Cys Cys Tyr Gly Asp						
	450			455		460
Asn Met Gln Leu Ile Thr Arg Gly Lys Gly Ala Gly Thr Pro Asn Leu						
	465			470		475
Ile Ser Thr Glu Phe Ser Ala Glu Leu His Tyr Lys Val Asp Val Leu						
	485			490		495
Pro Trp Ile Ile Cys Lys Gly Asp Trp Ser Arg Tyr Asn Glu Ala Arg						
	500			505		510
Pro Pro Asn Asn Gly Gln Lys Cys Thr Glu Ser Pro Ser Asp Glu Asp						
	515			520		525
Tyr Ile Lys Gln Phe Gln Glu Ala Arg Glu Tyr						

530

535

<210> 91
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 91
 gtacgtgtag tcttgaaacc agctttttctc tctccaaaga agcaccaagg gagcatctgg 60
 accaccaggc tgcacacca ccttccccca gaccgcgatt ccgacaagag acgggggcacc 120
 cttcattgca aagagatttc ccagatccct ttctccttga tctaccaaac tttccagatc 180
 tttccaaagc tgatatcaat gggcagaatc caaatatcca ggtcaccata gaggtggtcg 240
 acgggtcctga ctctgaagca gataaagatc agcatccgga gaataagccc agctgggtcag 300
 tccccatcccc cgactggcgg gcctggtggc agaggtccct gtccttggcc agggcaaaca 360
 gcgggggacca ggactacaag tacgacagta cctcagacga cagcaacttc ctcaaccccc 420
 ccagggggtg ggaccataca gccccaggcc accggacttt tgaaacaaaa gatcagccag 480
 aatatgattc cacagatggc gagggtgact ggagtctctg gtctgtctgc agcgtcacct 540
 gcggggaacgg caaccagaaa cggacccggg cttgtggcta cgcgtgcact gcaacagaaat 600
 cgaggacctg tgaccgtcca aactgcccag gaattgaaga cacttttagg acagctgccca 660
 ccgaagttag tctgcttgcg ggaagcgagg agtttaatgc caccaaactg tttgaagttg 720
 acacagacag ctgtgagcgc tggatgagct gcaaaaagcga gttcttaaag aagtacatgc 780
 acaaggtgat gaatgacctg cccagctgcc cctgctccta ccccactgag gtggcctaca 840
 gcacggctga catcttcgac cgcacaaagc gcaaggactt ccgctggaag gacgccagcg 900
 ggcccaagga gaagctggag atctacaagc ccactgcccg gtactgcatc cgctccatgc 960
 tgtccctgga gagcaccacg ctggcggcac agcactgctg ctacggcgac aacatgcagc 1020
 tcatcaccag gggcaagggg gcgggcacgc ccaacctcat cggcaccgag ttctccgcgg 1080
 agctccacta caaggtggac gtcctgccct ggattatctg caaggggtgac tggagcaggt 1140
 ataacgaggc ccggcctccc aacaacggac aggagtgcac agagagcccc tcggacgagg 1200
 actacatcaa gcagttccaa gaggccaggg aatattaa 1238

<210> 92
 <211> 411
 <212> PRT
 <213> Homo sapiens

<400> 92
 Thr Cys Ser Pro Glu Thr Ser Phe Ser Leu Ser Lys Glu Ala Pro Arg
 1 5 10 15
 Glu His Leu Asp His Gln Ala Ala His Gln Pro Phe Pro Arg Pro Arg
 20 25 30
 Phe Arg Gln Glu Thr Gly His Pro Ser Leu Gln Arg Asp Phe Pro Arg
 35 40 45
 Ser Phe Leu Leu Asp Leu Pro Asn Phe Pro Asp Leu Ser Lys Ala Asp
 50 55 60
 Ile Asn Gly Gln Asn Pro Asn Ile Gln Val Thr Ile Glu Val Val Asp
 65 70 75 80
 Gly Pro Asp Ser Glu Ala Asp Lys Asp Gln His Pro Glu Asn Lys Pro
 85 90 95
 Ser Trp Ser Val Pro Ser Pro Asp Trp Arg Ala Trp Trp Gln Arg Ser

100					105					110					
Leu	Ser	Leu	Ala	Arg	Ala	Asn	Ser	Gly	Asp	Gln	Asp	Tyr	Lys	Tyr	Asp
		115					120					125			
Ser	Thr	Ser	Asp	Asp	Ser	Asn	Phe	Leu	Asn	Pro	Pro	Arg	Gly	Trp	Asp
		130					135					140			
His	Thr	Ala	Pro	Gly	His	Arg	Thr	Phe	Glu	Thr	Lys	Asp	Gln	Pro	Glu
		145					150					155			160
Tyr	Asp	Ser	Thr	Asp	Gly	Glu	Gly	Asp	Trp	Ser	Leu	Trp	Ser	Val	Cys
				165					170					175	
Ser	Val	Thr	Cys	Gly	Asn	Gly	Asn	Gln	Lys	Arg	Thr	Arg	Ser	Cys	Gly
			180					185					190		
Tyr	Ala	Cys	Thr	Ala	Thr	Glu	Ser	Arg	Thr	Cys	Asp	Arg	Pro	Asn	Cys
		195					200					205			
Pro	Gly	Ile	Glu	Asp	Thr	Phe	Arg	Thr	Ala	Ala	Thr	Glu	Val	Ser	Leu
		210					215					220			
Leu	Ala	Gly	Ser	Glu	Glu	Phe	Asn	Ala	Thr	Lys	Leu	Phe	Glu	Val	Asp
		225					230					235			240
Thr	Asp	Ser	Cys	Glu	Arg	Trp	Met	Ser	Cys	Lys	Ser	Glu	Phe	Leu	Lys
				245					250					255	
Lys	Tyr	Met	His	Lys	Val	Met	Asn	Asp	Leu	Pro	Ser	Cys	Pro	Cys	Ser
			260					265					270		
Tyr	Pro	Thr	Glu	Val	Ala	Tyr	Ser	Thr	Ala	Asp	Ile	Phe	Asp	Arg	Ile
			275				280					285			
Lys	Arg	Lys	Asp	Phe	Arg	Trp	Lys	Asp	Ala	Ser	Gly	Pro	Lys	Glu	Lys
		290					295					300			
Leu	Glu	Ile	Tyr	Lys	Pro	Thr	Ala	Arg	Tyr	Cys	Ile	Arg	Ser	Met	Leu
		305					310					315			320
Ser	Leu	Glu	Ser	Thr	Thr	Leu	Ala	Ala	Gln	His	Cys	Cys	Tyr	Gly	Asp
				325					330					335	
Asn	Met	Gln	Leu	Ile	Thr	Arg	Gly	Lys	Gly	Ala	Gly	Thr	Pro	Asn	Leu
			340					345					350		
Ile	Gly	Thr	Glu	Phe	Ser	Ala	Glu	Leu	His	Tyr	Lys	Val	Asp	Val	Leu
		355					360					365			
Pro	Trp	Ile	Ile	Cys	Lys	Gly	Asp	Trp	Ser	Arg	Tyr	Asn	Glu	Ala	Arg
		370					375					380			
Pro	Pro	Asn	Asn	Gly	Gln	Glu	Cys	Thr	Glu	Ser	Pro	Ser	Asp	Glu	Asp
		385					390					395			400
Tyr	Ile	Lys	Gln	Phe	Gln	Glu	Ala	Arg	Glu	Tyr					

405

410

<210> 93
 <211> 391
 <212> PRT
 <213> Homo sapiens

<400> 93

His	Gln	Ala	Ala	His	Gln	Pro	Phe	Pro	Arg	Pro	Arg	Phe	Arg	Gln	Glu
1				5					10					15	
Thr	Gly	His	Pro	Ser	Leu	Gln	Arg	Asp	Phe	Pro	Arg	Ser	Phe	Leu	Leu
			20					25					30		
Asp	Leu	Pro	Asn	Phe	Pro	Asp	Leu	Ser	Lys	Ala	Asp	Ile	Asn	Gly	Gln
		35					40					45			
Asn	Pro	Asn	Ile	Gln	Val	Thr	Ile	Glu	Val	Val	Asp	Gly	Pro	Asp	Ser
	50					55					60				
Glu	Ala	Asp	Lys	Asp	Gln	His	Pro	Glu	Asn	Lys	Pro	Ser	Trp	Ser	Val
65					70					75					80
Pro	Ser	Pro	Asp	Trp	Arg	Ala	Trp	Trp	Gln	Arg	Ser	Leu	Ser	Leu	Ala
				85					90					95	
Arg	Ala	Asn	Ser	Gly	Asp	Gln	Asp	Tyr	Lys	Tyr	Asp	Ser	Thr	Ser	Asp
			100					105					110		
Asp	Ser	Asn	Phe	Leu	Asn	Pro	Pro	Arg	Gly	Trp	Asp	His	Thr	Ala	Pro
		115					120					125			
Gly	His	Arg	Thr	Phe	Glu	Thr	Lys	Asp	Gln	Pro	Glu	Tyr	Asp	Ser	Thr
	130					135					140				
Asp	Gly	Glu	Gly	Asp	Trp	Ser	Leu	Trp	Ser	Val	Cys	Ser	Val	Thr	Cys
145					150					155					160
Gly	Asn	Gly	Asn	Gln	Lys	Arg	Thr	Arg	Ser	Cys	Gly	Tyr	Ala	Cys	Thr
				165					170					175	
Ala	Thr	Glu	Ser	Arg	Thr	Cys	Asp	Arg	Pro	Asn	Cys	Pro	Gly	Ile	Glu
			180					185					190		
Asp	Thr	Phe	Arg	Thr	Ala	Ala	Thr	Glu	Val	Ser	Leu	Leu	Ala	Gly	Ser
			195				200					205			
Glu	Glu	Phe	Asn	Ala	Thr	Lys	Leu	Phe	Glu	Val	Asp	Thr	Asp	Ser	Cys
	210					215					220				
Glu	Arg	Trp	Met	Ser	Cys	Lys	Ser	Glu	Phe	Leu	Lys	Lys	Tyr	Met	His
225					230					235					240
Lys	Val	Met	Asn	Asp	Leu	Pro	Ser	Cys	Pro	Cys	Ser	Tyr	Pro	Thr	Glu
			245						250					255	

Val Ala Tyr Ser Thr Ala Asp Ile Phe Asp Arg Ile Lys Arg Lys Asp
 260 265 270
 Phe Arg Trp Lys Asp Ala Ser Gly Pro Lys Glu Lys Leu Glu Ile Tyr
 275 280 285
 Lys Pro Thr Ala Arg Tyr Cys Ile Arg Ser Met Leu Ser Leu Glu Ser
 290 295 300
 Thr Thr Leu Ala Ala Gln His Cys Cys Tyr Gly Asp Asn Met Gln Leu
 305 310 315 320
 Ile Thr Arg Gly Lys Gly Ala Gly Thr Pro Asn Leu Ile Ser Thr Glu
 325 330 335
 Phe Ser Ala Glu Leu His Tyr Lys Val Asp Val Leu Pro Trp Ile Ile
 340 345 350
 Cys Lys Gly Asp Trp Ser Arg Tyr Asn Glu Ala Arg Pro Pro Asn Asn
 355 360 365
 Gly Gln Lys Cys Thr Glu Ser Pro Ser Asp Glu Asp Tyr Ile Lys Gln
 370 375 380
 Phe Gln Glu Ala Arg Glu Tyr
 385 390

<210> 94
 <211> 658
 <212> PRT
 <213> Homo sapiens

<400> 94
 Met Arg Ala Leu Arg Asp Arg Ala Gly Leu Leu Leu Cys Val Leu Leu
 1 5 10 15
 Leu Ala Ala Leu Leu Glu Ala Ala Leu Gly Leu Pro Val Lys Lys Pro
 20 25 30
 Arg Leu Arg Gly Pro Arg Pro Gly Ser Leu Thr Arg Leu Ala Glu Val
 35 40 45
 Ser Gly Gly Gly Thr Gly Leu Arg Ser Ala Leu Ser Val Pro Pro Pro
 50 55 60
 Gln Pro Ala Gly Ser Ser Arg Ala Gly Ser Gly Thr Gly Thr His Thr
 65 70 75 80
 Gly Ser Asp Pro Pro Met Glu Arg Gly Ala Gly Ala Gly Arg Lys Leu
 85 90 95
 Pro Asp Thr Gly Arg Cys Pro Val Thr Glu Gly Ser Thr Val Gln Leu
 100 105 110
 Ile Ala Pro Trp Asn Ala Ala Asp Val His Ser His Gly Asp Lys Asp
 115 120 125

Ser	Gln	Thr	Cys	Ile	Arg	Val	Ser	Ala	Ser	Pro	Asp	Pro	Arg	Pro	Leu	130	135	140	
Lys	Glu	Glu	Glu	Glu	Ala	Pro	Leu	Leu	Pro	Arg	Thr	His	Leu	Gln	Ala	145	150	155	160
Glu	Pro	His	Gln	His	Gly	Cys	Trp	Thr	Val	Thr	Glu	Pro	Ala	Ala	Met	165	170	175	
Thr	Pro	Gly	Asn	Ala	Thr	Pro	Pro	Arg	Thr	Pro	Glu	Val	Thr	Pro	Leu	180	185	190	
Arg	Leu	Glu	Leu	Gln	Lys	Leu	Pro	Gly	Leu	Ala	Asn	Thr	Thr	Leu	Ser	195	200	205	
Thr	Pro	Asn	Pro	Asp	Thr	Gln	Ala	Ser	Ala	Ser	Pro	Asp	Pro	Arg	Pro	210	215	220	
Leu	Arg	Glu	Glu	Glu	Glu	Ala	Arg	Leu	Leu	Pro	Arg	Thr	His	Leu	Gln	225	230	235	240
Ala	Glu	Leu	His	Gln	His	Gly	Cys	Trp	Thr	Val	Thr	Glu	Pro	Ala	Ala	245	250	255	
Leu	Thr	Pro	Gly	Asn	Ala	Thr	Pro	Pro	Arg	Thr	Gln	Glu	Val	Thr	Pro	260	265	270	
Leu	Leu	Leu	Glu	Leu	Gln	Lys	Leu	Pro	Glu	Leu	Val	His	Ala	Thr	Leu	275	280	285	
Ser	Thr	Pro	Asn	Pro	Asp	Asn	Gln	Val	Thr	Ile	Lys	Val	Val	Glu	Asp	290	295	300	
Pro	Gln	Ala	Glu	Val	Ser	Ile	Asp	Leu	Leu	Ala	Glu	Pro	Ser	Asn	Pro	305	310	315	320
Pro	Pro	Gln	Asp	Thr	Leu	Ser	Trp	Leu	Pro	Ala	Leu	Trp	Ser	Phe	Leu	325	330	335	
Trp	Gly	Asp	Tyr	Lys	Gly	Glu	Glu	Lys	Asp	Arg	Ala	Pro	Gly	Glu	Lys	340	345	350	
Gly	Glu	Glu	Lys	Glu	Glu	Asp	Glu	Asp	Tyr	Pro	Ser	Glu	Asp	Ile	Glu	355	360	365	
Gly	Glu	Asp	Gln	Glu	Asp	Lys	Glu	Glu	Asp	Glu	Glu	Glu	Gln	Ala	Leu	370	375	380	
Trp	Phe	Asn	Gly	Thr	Thr	Asp	Asn	Trp	Asp	Gln	Gly	Trp	Leu	Ala	Pro	385	390	395	400
Gly	Asp	Trp	Val	Phe	Lys	Asp	Ser	Val	Ser	Tyr	Asp	Tyr	Glu	Pro	Gln	405	410	415	
Lys	Glu	Trp	Ser	Pro	Trp	Ser	Pro	Cys	Ser	Gly	Asn	Cys	Ser	Thr	Gly	420	425	430	

Lys Gln Gln Arg Thr Arg Pro Cys Gly Tyr Gly Cys Thr Ala Thr Glu
435 440 445

Thr Arg Thr Cys Asp Leu Pro Ser Cys Pro Gly Thr Glu Asp Lys Asp
450 455 460

Thr Leu Gly Leu Pro Ser Glu Glu Trp Lys Leu Leu Ala Arg Asn Ala
465 470 475 480

Thr Asp Met His Asp Gln Asp Val Asp Ser Cys Glu Lys Trp Leu Asn
485 490 495

Cys Lys Ser Asp Phe Leu Ile Lys Tyr Leu Ser Gln Met Leu Arg Asp
500 505 510

Leu Pro Ser Cys Pro Cys Ala Tyr Pro Leu Glu Ala Met Asp Ser Pro
515 520 525

Val Ser Leu Gln Asp Glu His Gln Gly Arg Ser Phe Arg Trp Arg Asp
530 535 540

Ala Ser Gly Pro Arg Glu Arg Leu Asp Ile Tyr Gln Pro Thr Ala Arg
545 550 555 560

Phe Cys Leu Arg Ser Met Leu Ser Gly Glu Ser Ser Thr Leu Ala Ala
565 570 575

Gln His Cys Cys Tyr Asp Glu Asp Ser Arg Leu Leu Thr Arg Gly Lys
580 585 590

Gly Ala Gly Met Pro Asn Leu Ile Ser Thr Asp Phe Ser Pro Lys Leu
595 600 605

His Phe Lys Phe Asp Thr Thr Pro Trp Ile Leu Cys Lys Gly Asp Trp
610 615 620

Ser Arg Leu His Ala Val Leu Pro Pro Asn Asn Gly Arg Ala Cys Thr
625 630 635 640

Asp Asn Pro Leu Glu Glu Glu Tyr Leu Ala Gln Leu Gln Glu Ala Lys
645 650 655

Glu Tyr

<210> 95

<211> 60

<212> PRT

<213> Homo sapiens

<400> 95

Asn Asn Leu Asn Val Gly Ser Asp Thr Thr Ser Glu Thr Ser Phe Ser
1 5 10 15

Leu Ser Lys Glu Ala Pro Arg Glu His Leu Asp His Gln Ala Ala His

	20		25		30										
Gln	Pro	Phe	Pro	Arg	Pro	Arg	Phe	Arg	Gln	Glu	Thr	Gly	His	Pro	Ser
		35					40					45			

Leu	Gln	Arg	Asp	Phe	Pro	Arg	Ser	Phe	Leu	Leu	Asp
	50					55				60	

<210> 96
 <211> 660
 <212> PRT
 <213> Cryptosporidium wairi

<400> 96															
Lys	Leu	Thr	His	Tyr	Ser	Val	Gly	Gly	His	Ala	Ser	Thr	Ser	Arg	Val
	1				5				10					15	

Lys	Gly	Arg	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Asp	Phe	Lys	Val	Pro
			20					25					30		

Gly	Leu	Asn	Gly	Tyr	Leu	Cys	Pro	Ser	Tyr	Asn	Arg	Asp	Pro	Arg	Gly
		35					40					45			

Phe	Gly	Cys	Phe	Gly	Leu	Asn	Thr	Ala	Tyr	Thr	Val	Lys	Lys	Asn	Ser
	50					55					60				

Trp	Gln	Glu	Cys	Ala	Asn	Gln	Cys	Tyr	Trp	Ser	Lys	Tyr	Thr	Ile	Tyr
	65				70					75				80	

Gly	Asn	Cys	Gln	Arg	Ser	Val	Tyr	Asn	Ser	Asn	Asn	Gln	Asp	Cys	His
				85					90					95	

Ile	Lys	Gly	Gly	Asp	Asn	Asp	Cys	Met	Lys	Ser	Pro	Asp	Gly	Met	Ile
		100						105					110		

Leu	Thr	Asn	Arg	Gln	Ser	Tyr	Met	Ile	Gly	Glu	Cys	Ala	Thr	Thr	Cys
		115					120					125			

Thr	Val	Ser	Ser	Trp	Ser	Ser	Trp	Thr	Pro	Cys	Ser	Gly	Val	Cys	Gly
	130					135					140				

Glu	Met	Arg	Ser	Arg	Thr	Arg	Ser	Val	Leu	Ser	Phe	Pro	Arg	Tyr	Asp
	145				150					155				160	

His	Glu	Tyr	Cys	Pro	His	Leu	Ile	Glu	Tyr	Ser	Asn	Cys	Val	Val	Gln
				165					170					175	

Asn	Lys	Cys	Pro	Glu	Asn	Cys	Pro	Gln	Tyr	Gly	Val	Ser	Ile	Leu	Gly
			180					185					190		

Trp	Gly	Cys	Gln	Phe	Glu	Ser	Met	Phe	Ser	Phe	Asn	Lys	Asn	Leu	Phe
		195					200					205			

Val	Ser	Tyr	Glu	Glu	Asp	Trp	Lys	Gly	Cys	Met	Ser	Thr	Cys	Lys	Gln
	210					215					220				

Asp	Pro	Phe	Cys	Val	Ala	Trp	Ser	Tyr	Asn	Ala	Thr	Leu	Ser	Glu	Gly	225	230	235	240
Pro	Asp	Ser	Val	Gly	Phe	Ser	Arg	Glu	Tyr	Arg	Pro	Cys	Tyr	Thr	His	245	250	255	
Arg	Phe	Ala	Ser	Gly	Cys	Gln	Ala	Leu	Ala	Pro	Gly	Trp	Val	Ser	Gly	260	265	270	
Asn	Lys	Tyr	Thr	Arg	Asp	Val	Asp	Cys	Glu	Thr	Gly	Thr	Cys	Ile	His	275	280	285	
Asn	Glu	Trp	Ser	Ser	Trp	Thr	Thr	Cys	Lys	Asp	Pro	Cys	Ser	Asn	Thr	290	295	300	
Glu	Thr	Met	Ser	Arg	Asn	Arg	Thr	Val	Lys	Ser	Val	Ser	Gln	Asn	Trp	305	310	315	320
Ala	Ser	Thr	Thr	Cys	Arg	Asp	Glu	Ser	Gln	Ile	Gln	Leu	Cys	Ser	Glu	325	330	335	
Asn	Pro	Gln	Ser	Ile	Glu	Thr	Cys	Lys	Thr	Cys	Leu	Val	Gly	Ser	Trp	340	345	350	
Ser	Glu	Trp	Ser	Asp	Cys	Ser	Thr	Ser	Cys	Gly	Glu	Gly	Asn	Arg	Ile	355	360	365	
Arg	Thr	Arg	Glu	Ser	Thr	Lys	Pro	Pro	Leu	Asn	Gly	Asp	Glu	Ser	Thr	370	375	380	
Cys	Pro	Glu	Leu	Ile	Ala	Lys	Glu	Ser	Cys	Asn	Lys	Asp	Val	Glu	Cys	385	390	395	400
Pro	Asn	Ile	Gln	Cys	Glu	Leu	Gly	Glu	Trp	Ser	Ser	Trp	Ser	Pro	Cys	405	410	415	
Ser	Val	Thr	Cys	Gly	Ser	Gly	Thr	Thr	Ser	Arg	Asn	Arg	Glu	Val	Lys	420	425	430	
Gly	Glu	Asn	Cys	Thr	Glu	Leu	Pro	Thr	Glu	Ser	Lys	Lys	Cys	Asn	Leu	435	440	445	
Ala	Asn	Cys	Gly	Asp	Asn	Ser	Ala	Ser	Cys	Thr	Ala	Val	Met	Ser	Val	450	455	460	
Trp	Ser	Glu	Trp	Ser	Ala	Cys	Ser	Glu	Lys	Cys	Asp	Gln	Gly	Leu	Val	465	470	475	480
Arg	Arg	Tyr	Arg	Asp	Phe	Asp	Phe	Ser	Lys	Ile	Gly	Val	Phe	Gly	Tyr	485	490	495	
Val	Pro	Pro	Gly	Lys	Ser	Glu	Glu	Gln	Asn	Lys	Val	Arg	Glu	Ile	Cys	500	505	510	
Lys	Asp	Thr	Pro	Thr	Leu	Glu	Glu	Glu	Pro	Cys	Thr	Ser	Gly	Val	Thr	515	520	525	

Cys Thr Pro Gly Cys Lys Tyr Thr Glu Trp Ser Ala Trp Ser Ser Cys
 530 535 540
 Asp Cys Ser Gly Ser Gln Thr Arg Asp Arg Val Val Thr Phe Pro Glu
 545 550 555 560
 Gly Ile Ile Asp Ala Ile Cys Gln Ser Ser Lys Asp Thr Arg Ser Cys
 565 570 575
 Ser Lys Pro Glu Gly Cys Thr Glu Thr Thr Pro Asp Ser Gly Asp Ala
 580 585 590
 Thr Leu Ala Ile Ala Ile Gly Leu Pro Val Gly Ile Leu Gly Leu Cys
 595 600 605
 Ile Ile Ala Gly Ser Leu Phe Leu Ile Gly Gly Arg Ser Gly Asn Gln
 610 615 620
 Glu Glu Asp Glu Thr Ser Tyr Gln Tyr Phe Asp Gln Pro Ser Ala Ala
 625 630 635 640
 Leu Asp Gln Asp Ser Glu Tyr Val Gln Glu Ile Gly Pro Glu Ser Gln
 645 650 655
 Asn Trp Ala Ser
 660

<210> 97
 <211> 831
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Gly Leu Ala Trp Gly Leu Gly Val Leu Phe Leu Met His Val Cys
 1 5 10 15
 Gly Thr Asn Arg Ile Pro Glu Ser Gly Gly Asp Asn Ser Val Phe Asp
 20 25 30
 Ile Phe Glu Leu Thr Gly Ala Ala Arg Lys Gly Ser Gly Arg Arg Leu
 35 40 45
 Val Lys Gly Pro Asp Pro Ser Ser Pro Ala Phe Arg Ile Glu Asp Ala
 50 55 60
 Asn Leu Ile Pro Pro Val Pro Asp Asp Lys Phe Gln Asp Leu Val Asp
 65 70 75 80
 Ala Val Arg Thr Glu Lys Gly Phe Leu Leu Leu Ala Ser Leu Arg Gln
 85 90 95
 Met Lys Lys Thr Arg Gly Thr Leu Leu Ala Leu Glu Arg Lys Asp His
 100 105 110
 Ser Gly Gln Val Phe Ser Val Val Ser Asn Gly Lys Ala Gly Thr Leu
 115 120 125

Asp	Leu	Ser	Leu	Thr	Val	Gln	Gly	Lys	Gln	His	Val	Val	Ser	Val	Glu	130	135	140	
Glu	Ala	Leu	Leu	Ala	Thr	Gly	Gln	Trp	Lys	Ser	Ile	Thr	Leu	Phe	Val	145	150	155	160
Gln	Glu	Asp	Arg	Ala	Gln	Leu	Tyr	Ile	Asp	Cys	Glu	Lys	Met	Glu	Asn	165	170	175	
Ala	Glu	Leu	Asp	Val	Pro	Ile	Gln	Ser	Val	Phe	Thr	Arg	Asp	Leu	Ala	180	185	190	
Ser	Ile	Ala	Arg	Leu	Arg	Ile	Ala	Lys	Gly	Gly	Val	Asn	Asp	Asn	Phe	195	200	205	
Gln	Gly	Val	Leu	Gln	Asn	Val	Arg	Phe	Val	Phe	Gly	Thr	Thr	Pro	Glu	210	215	220	
Asp	Ile	Leu	Arg	Asn	Lys	Gly	Cys	Ser	Ser	Ser	Thr	Ser	Val	Leu	Leu	225	230	235	240
Thr	Leu	Asp	Asn	Asn	Val	Val	Asn	Gly	Ser	Ser	Pro	Ala	Ile	Arg	Thr	245	250	255	
Asn	Tyr	Ile	Gly	His	Lys	Thr	Lys	Asp	Leu	Gln	Ala	Ile	Cys	Gly	Ile	260	265	270	
Ser	Cys	Asp	Glu	Leu	Ser	Ser	Met	Val	Leu	Glu	Leu	Arg	Gly	Leu	Arg	275	280	285	
Thr	Ile	Val	Thr	Thr	Leu	Gln	Asp	Ser	Ile	Arg	Lys	Val	Thr	Glu	Glu	290	295	300	
Asn	Lys	Glu	Leu	Ala	Asn	Glu	Leu	Arg	Arg	Pro	Pro	Leu	Cys	Tyr	His	305	310	315	320
Asn	Gly	Val	Gln	Tyr	Arg	Asn	Asn	Glu	Glu	Trp	Thr	Val	Asp	Ser	Cys	325	330	335	
Thr	Glu	Cys	His	Cys	Gln	Asn	Ser	Val	Thr	Ile	Cys	Lys	Lys	Val	Ser	340	345	350	
Cys	Pro	Ile	Met	Pro	Cys	Ser	Asn	Ala	Thr	Val	Pro	Asp	Gly	Glu	Cys	355	360	365	
Cys	Pro	Arg	Cys	Trp	Pro	Ser	Asp	Ser	Ala	Asp	Asp	Gly	Trp	Ser	Pro	370	375	380	
Trp	Ser	Glu	Trp	Thr	Ser	Cys	Ser	Thr	Ser	Cys	Gly	Asn	Gly	Ile	Gln	385	390	395	400
Gln	Arg	Gly	Arg	Ser	Cys	Asp	Ser	Leu	Asn	Asn	Arg	Cys	Glu	Gly	Ser	405	410	415	
Ser	Val	Gln	Thr	Arg	Thr	Cys	His	Ile	Gln	Glu	Cys	Asp	Lys	Arg	Phe	420	425	430	

Lys Gln Asp Gly Gly Trp Ser His Trp Ser Pro Trp Ser Ser Cys Ser
 435 440 445
 Val Thr Cys Gly Asp Gly Val Ile Thr Arg Ile Arg Leu Cys Asn Ser
 450 455 460
 Pro Ser Pro Gln Met Asn Gly Lys Pro Cys Glu Gly Glu Ala Arg Glu
 465 470 475 480
 Thr Lys Ala Cys Lys Lys Asp Ala Cys Pro Ile Asn Gly Gly Trp Gly
 485 490 495
 Pro Trp Ser Pro Trp Asp Ile Cys Ser Val Thr Cys Gly Gly Gly Val
 500 505 510
 Gln Lys Arg Ser Arg Leu Cys Asn Asn Pro Thr Pro Gln Phe Gly Gly
 515 520 525
 Lys Asp Cys Val Gly Asp Val Thr Glu Asn Gln Ile Cys Asn Lys Gln
 530 535 540
 Asp Cys Pro Ile Asp Gly Cys Leu Ser Asn Pro Cys Phe Ala Gly Val
 545 550 555 560
 Lys Cys Thr Ser Tyr Pro Asp Gly Ser Trp Lys Cys Gly Ala Cys Pro
 565 570 575
 Pro Gly Tyr Ser Gly Asn Gly Ile Gln Cys Thr Asp Val Asp Glu Cys
 580 585 590
 Lys Glu Val Pro Asp Ala Cys Phe Asn His Asn Gly Glu His Arg Cys
 595 600 605
 Glu Asn Thr Asp Pro Gly Tyr Asn Cys Leu Pro Cys Pro Pro Arg Phe
 610 615 620
 Thr Gly Ser Gln Pro Phe Gly Gln Gly Val Glu His Ala Thr Ala Asn
 625 630 635 640
 Lys Gln Val Cys Lys Pro Arg Asn Pro Cys Thr Asp Gly Thr His Asp
 645 650 655
 Cys Asn Lys Asn Ala Lys Cys Asn Tyr Leu Gly His Tyr Ser Asp Pro
 660 665 670
 Met Tyr Arg Cys Glu Cys Lys Pro Gly Tyr Ala Gly Asn Gly Ile Ile
 675 680 685
 Cys Gly Glu Asp Thr Asp Leu Asp Gly Trp Pro Asn Glu Asn Leu Val
 690 695 700
 Cys Val Ala Asn Ala Thr Tyr His Cys Lys Lys Asp Asn Cys Pro Asn
 705 710 715 720
 Leu Pro Asn Ser Gly Gln Glu Asp Tyr Asp Lys Asp Gly Ile Gly Asp
 725 730 735

Ala Cys Asp Asp Asp Asp Asp Asn Asp Lys Ile Pro Asp Asp Arg Asp
740 745 750

Asn Cys Pro Phe His Tyr Asn Pro Ala Gln Tyr Asp Tyr Asp Arg Asp
755 760 765

Asp Val Gly Asp Arg Cys Asp Asn Cys Pro Tyr Asn His Asn Pro Asp
770 775 780

Gln Ala Asp Thr Asp Asn Asn Gly Glu Gly Asp Ala Cys Ala Ala Asp
785 790 795 800

Ile Asp Gly Asp Gly Ile Leu Asn Glu Arg Asp Asn Cys Gln Tyr Val
805 810 815

Tyr Asn Val Asp Gln Arg Asp Thr Asp Met Asp Gly Val Gly Asp
820 825 830

<210> 98

<211> 831

<212> PRT

<213> Mus musculus

<400> 98

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20 25 30

Ile Phe Glu Leu Ile Gly Gly Ala Arg Arg Gly Pro Gly Arg Arg Leu
35 40 45

Val Lys Gly Gln Asp Leu Ser Ser Pro Ala Phe Arg Ile Glu Asn Ala
50 55 60

Asn Leu Ile Pro Ala Val Pro Asp Asp Lys Phe Gln Asp Leu Leu Asp
65 70 75 80

Ala Val Trp Ala Asp Lys Gly Phe Ile Phe Leu Ala Ser Leu Arg Gln
85 90 95

Met Lys Lys Thr Arg Gly Thr Leu Leu Ala Val Glu Arg Lys Asp Asn
100 105 110

Thr Gly Gln Ile Phe Ser Val Val Ser Asn Gly Lys Ala Gly Thr Leu
115 120 125

Asp Leu Ser Leu Ser Leu Pro Gly Lys Gln Gln Val Val Ser Val Glu
130 135 140

Glu Ala Leu Leu Ala Thr Gly Gln Trp Lys Ser Ile Thr Leu Phe Val
145 150 155 160

Gln Glu Asp Arg Ala Gln Leu Tyr Ile Asp Cys Asp Lys Met Glu Ser

165																170								175							
Ala	Glu	Leu	Asp	Val	Pro	Ile	Gln	Ser	Ile	Phe	Thr	Arg	Asp	Leu	Ala																
			180				185						190																		
Ser	Val	Ala	Arg	Leu	Arg	Val	Ala	Lys	Gly	Asp	Val	Asn	Asp	Asn	Phe																
			195				200						205																		
Gln	Gly	Val	Leu	Gln	Asn	Val	Arg	Phe	Val	Phe	Gly	Thr	Thr	Pro	Glu																
			210				215						220																		
Asp	Ile	Leu	Arg	Asn	Lys	Gly	Cys	Ser	Ser	Ser	Thr	Asn	Val	Leu	Leu																
225							230						235																		
Thr	Leu	Asp	Asn	Asn	Val	Val	Asn	Gly	Ser	Ser	Pro	Ala	Ile	Arg	Thr																
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Asn	Tyr	Ile	Gly	His	Lys	Thr	Lys	Asp	Leu	Gln	Ala	Ile	Cys	Gly	Leu																
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Ser	Cys	Asp	Glu	Leu	Ser	Ser	Met	Val	Leu	Glu	Leu	Lys	Gly	Leu	Arg																
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Thr	Ile	Val	Thr	Thr	Leu	Gln	Asp	Ser	Ile	Arg	Lys	Val	Thr	Glu	Glu																
						290						295			300																
Asn	Arg	Glu	Leu	Val	Ser	Glu	Leu	Lys	Arg	Pro	Pro	Leu	Cys	Phe	His																
305							310						315																		
Asn	Gly	Val	Gln	Tyr	Lys	Asn	Asn	Glu	Glu	Trp	Thr	Val	Asp	Ser	Cys																
						325						330			335																
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Cys	Pro	Arg	Cys	Trp	Pro	Ser	Asp	Ser	Ala	Asp	Asp	Gly	Trp	Ser	Pro																
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385							390						395																		
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465		470		475		480
Thr Lys Ala Cys	Lys Lys Asp Ala Cys	Pro Ile Asn Gly Gly Trp Gly				
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Gln Arg Arg Ser Arg Leu Cys	Asn Asn Pro Thr Pro Gln Phe Gly Gly					
	515	520			525	
Lys Asp Cys Val Gly Asp Val Thr Glu Asn Gln Val Cys Asn Lys Gln						
	530	535			540	
Asp Cys Pro Ile Asp Gly Cys Leu Ser Asn Pro Cys Phe Ala Gly Ala						
	545	550		555		560
Lys Cys Thr Ser Tyr Pro Asp Gly Ser Trp Lys Cys Gly Ala Cys Pro						
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Pro Gly Tyr Ser Gly Asn Gly Ile Gln Cys Lys Asp Val Asp Glu Cys						
	580	585				590
Lys Glu Val Pro Asp Ala Cys Phe Asn His Asn Gly Glu His Arg Cys						
	595	600			605	
Lys Asn Thr Asp Pro Gly Tyr Asn Cys Leu Pro Cys Pro Pro Arg Phe						
	610	615			620	
Thr Gly Ser Gln Pro Phe Gly Arg Gly Val Glu His Ala Met Ala Asn						
	625	630		635		640
Lys Gln Val Cys Lys Pro Arg Asn Pro Cys Thr Asp Gly Thr His Asp						
	645	650				655
Cys Asn Lys Asn Ala Lys Cys Asn Tyr Leu Gly His Tyr Ser Asp Pro						
	660	665				670
Met Tyr Arg Cys Glu Cys Lys Pro Gly Tyr Ala Gly Asn Gly Ile Ile						
	675	680			685	
Cys Gly Glu Asp Thr Asp Leu Asp Gly Trp Pro Asn Glu Asn Leu Val						
	690	695			700	
Cys Val Ala Asn Ala Thr Tyr His Cys Lys Lys Asp Asn Cys Pro Asn						
	705	710			715	720
Leu Pro Asn Ser Gly Gln Glu Asp Tyr Asp Lys Asp Gly Ile Gly Asp						
	725	730				735
Ala Cys Asp Asp Asp Asp Asp Asn Asp Lys Ile Pro Asp Asp Arg Asp						
	740	745				750
Asn Cys Pro Phe His Tyr Asn Pro Ala Gln Tyr Asp Tyr Asp Arg Asp						
	755	760			765	
Asp Val Gly Asp Arg Cys Asp Asn Cys Pro Tyr Asn His Asn Pro Asp						

770

775

780

Gln Ala Asp Thr Asp Lys Asn Gly Glu Gly Asp Ala Cys Ala Val Asp
785 790 795 800

Ile Asp Gly Asp Gly Ile Leu Asn Glu Arg Asp Asn Cys Gln Tyr Val
805 810 815

Tyr Asn Val Asp Gln Arg Asp Thr Asp Met Asp Gly Val Gly Asp
820 825 830

<210> 99

<211> 2760

<212> DNA

<213> Homo sapiens

<400> 99

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<210> 100

<211> 206

<212> PRT

<213> Homo sapiens

<400> 100

Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His His Cys
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 20 25 30

Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Glu
 35 40 45

Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys Gln Leu
 50 55 60

Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asn Ser
 65 70 75 80

Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln Arg Tyr
 85 90 95

Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val His Ile
 100 105 110

Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Glu Lys Asp
 115 120 125

Ile His Ala Tyr Thr Ser Leu Arg Gly Ser Gln Pro Ala Ser Glu Gly
 130 135 140

Gly Asn Ala Arg Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
 145 150 155 160

Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
 165 170 175

Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ile Cys Arg Leu Pro
 180 185 190

Ser Ser Ser Met Asn Leu Gly Thr Ser Asn Ser Thr Trp Gly
 195 200 205

<210> 101

<211> 673

<212> DNA
 <213> Homo sapiens

<400> 101
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 gtgctgcagc cagaagggtgc cgctgcggcg catgtgcttt gtggaccccg tgcggcagtg 180
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 aatcgaaatt gtacacattt ccaccgtgca gacccacaca gaaggcttcc ctcctggaga 420
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<210> 102
 <211> 202
 <212> PRT
 <213> Homo sapiens

<400> 102
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 20 25 30
 Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Glu
 35 40 45
 Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys Gln Leu
 50 55 60
 Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asn Ser
 65 70 75 80
 Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln Arg Tyr
 85 90 95
 Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val His Ile
 100 105 110
 Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Glu Lys Asp
 115 120 125
 Ile His Ala Tyr Thr Ser Leu Arg Gly Ser Gln Pro Ala Ser Glu Gly
 130 135 140
 Gly Asn Ala Gln Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
 145 150 155 160
 Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
 165 170 175

Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ala Met His Lys Ala
180 185 190

Ala Lys Leu Leu Tyr Glu Ser Arg Asp Gln
195 200

<210> 103

<211> 234

<212> PRT

<213> Homo sapiens

<400> 103

Met Ser Ser Glu Val Ser Ala Arg Arg Asp Ala Lys Lys Leu Val Arg
1 5 10 15

Ser Pro Ser Gly Leu Arg Met Val Pro Glu His Arg Ala Phe Gly Ser
20 25 30

Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
35 40 45

Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
50 55 60

His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65 70 75 80

Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
85 90 95

Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys
100 105 110

Gln Leu Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly
115 120 125

Asn Ser Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln
130 135 140

Arg Tyr Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val
145 150 155 160

His Ile Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Gly
165 170 175

Gly Asn Ala Arg Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
180 185 190

Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
195 200 205

Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ala Met His Lys Ala
210 215 220

Ala Lys Leu Leu Tyr Glu Ser Arg Asp Gln
225 230

<210> 104
 <211> 211
 <212> PRT
 <213> Mus musculus

<400> 104
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 Pro Gln Trp Val Pro Asp Lys Glu Cys Pro Arg Cys Met Gln Cys Asp
 20 25 30
 Ala Lys Phe Asp Phe Ile Thr Arg Lys His His Cys Arg Arg Cys Gly
 35 40 45
 Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln Lys Val Pro Leu Arg Arg
 50 55 60
 Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Asp Cys Ala Leu Val
 65 70 75 80
 Ser His Arg Glu Ala Glu Phe Tyr Asp Lys Gln Leu Lys Val Leu Leu
 85 90 95
 Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asp Ser Glu Lys Pro Glu
 100 105 110
 Thr Met Val Cys Arg Leu Ser Asn Asn Gln Arg Cys Leu Val Leu Asp
 115 120 125
 Gly Asp Ser His Arg Glu Ile Glu Ile Ala His Val Cys Thr Val Gln
 130 135 140
 Ile Leu Thr Glu Gly Phe Thr Pro Gly Ala Gly Ser Thr Leu Ala Thr
 145 150 155 160
 Gly Met Leu Leu Gln Tyr Thr Val Pro Gly Ala Glu Ala Ala Ala Gln
 165 170 175
 Leu Arg Leu Met Ala Gly Glu Asp Ala Ser Gly Ser Lys Arg Gln Ala
 180 185 190
 Ala Ala Trp Leu Ala Ala Met His Lys Ala Thr Lys Leu Leu Tyr Glu
 195 200 205
 Ser Arg Asp Gln
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<210> 105
 <211> 327
 <212> PRT
 <213> Homo sapiens

<400> 105

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 Val Pro Ala Ser Val Arg Ala Pro Glu Arg Pro Leu Pro Gly Leu Arg
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 Ser Ala Arg Arg Ala Ala Cys Arg Ala Tyr Ser Gly Pro Arg Thr Cys
 35 40 45
 Pro Ala His Leu Pro Ala Ala Arg Ser Ala Leu Arg Ala Ser Leu Ala
 50 55 60
 Ser Leu Pro Ala Thr Ala Arg Gly Leu Arg Pro Cys Leu Arg Val Arg
 65 70 75 80
 Pro Ala Pro Gln Pro Gly Pro Gly Ala Ala Leu Arg Arg Ala Arg Ala
 85 90 95
 Ala Arg Ser Pro Ala Arg Ala Gly Ala Ala Met Met Asn Arg Phe Arg
 100 105 110
 Lys Trp Leu Tyr Lys Pro Lys Arg Ser Asp Pro Gln Leu Leu Ala Arg
 115 120 125
 Phe Tyr Tyr Ala Asp Glu Glu Leu Asn Gln Val Ala Ala Glu Leu Asp
 130 135 140
 Ser Leu Asp Gly Arg Lys Asp Pro Gln Arg Cys Thr Leu Leu Val Ser
 145 150 155 160
 Gln Phe Arg Ser Cys Gln Asp Asn Val Leu Asn Ile Ile Asn Gln Ile
 165 170 175
 Met Asp Glu Cys Ile Pro Gln Asp Arg Ala Pro Arg Asp Phe Cys Val
 180 185 190
 Lys Phe Pro Glu Glu Ile Arg His Asp Asn Leu Ala Gly Gln Leu Trp
 195 200 205
 Phe Gly Ala Glu Cys Leu Ala Ala Gly Ser Ile Ile Met Asn Arg Glu
 210 215 220
 Leu Glu Ser Met Ala Met Arg Pro Leu Ala Lys Glu Leu Thr Arg Ser
 225 230 235 240
 Leu Glu Asp Val Arg Gly Ala Leu Arg Asp Gln Ala Leu Arg Asp Leu
 245 250 255
 Asn Thr Tyr Thr Glu Lys Met Arg Glu Ala Leu Arg His Phe Asp Val
 260 265 270
 Leu Phe Ala Glu Phe Glu Leu Ser Tyr Val Ser Ala Met Val Pro Val
 275 280 285
 Lys Ser Pro Arg Glu Tyr Tyr Val Gln Gln Glu Val Ile Val Leu Phe
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Cys Glu Thr Val Glu Arg Ala Leu Asp Phe Gly Tyr Leu Thr Gln Asp
 305 310 315 320

Met Ile Asp Asp Tyr Glu Pro
 325

<210> 106
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 106
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Ser Ser Pro Asp Gln Pro Ser Arg Ser His Leu Asp Asp Asp Gly Met
 20 25 30

Pro Val Tyr Thr Asp Thr Ile Gln Gln Arg Leu Arg Gln Ile Glu Ser
 35 40 45

Gly His Gln Gln Glu Val Glu Thr Leu Lys Lys Gln Val Gln Glu Leu
 50 55 60

Lys Ser Arg Leu Glu Ser Gln Tyr Leu Thr Ser Ser Leu Arg Phe Asn
 65 70 75 80

Gly Asp Phe Gly Asp Glu Val Met Thr Arg Trp Leu Pro Asp His Leu
 85 90 95

Ala Ala His Cys Tyr Ala Cys Asp Ser Ala Phe Trp Leu Ala Ser Arg
 100 105 110

Lys His His Cys Arg Asn Cys Gly Asn Val Phe Cys Ser Ser Cys Cys
 115 120 125

Asn Gln Lys Val Pro Val Pro Ser Gln Gln Leu Phe Glu Pro Ser Arg
 130 135 140

Val Cys Lys Ser Cys Tyr Ser Ser Leu His Pro Thr Ser Ser Ser Ile
 145 150 155 160

Asp Leu Glu Leu Asp Lys Pro Ile Ala Ala Thr Ser Asn
 165 170

<210> 107
 <211> 597
 <212> PRT
 <213> Mus musculus

<400> 107
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Leu Pro Arg Ser Pro Ala Ser Pro Ser His Leu Thr His Phe Lys Pro

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Phe	Val	Asn	Leu	Phe	Arg	Phe	Asn	Lys	Glu	Arg	Gly	Glu	Gly	Gly	Gln
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Gly	Glu	Gln	Gln	Ser	Pro	Ser	Ser	Ser	Trp	Ala	Ser	Pro	Gln	Ile	Pro
	65					70					75				80
Ser	Arg	Thr	Gln	Ser	Val	Arg	Ser	Pro	Val	Pro	Tyr	Lys	Lys	Gln	Leu
			85						90					95	
Asn	Glu	Glu	Leu	His	Arg	Arg	Ser	Ser	Val	Leu	Glu	Asn	Thr	Leu	Pro
			100					105					110		
His	Pro	Gln	Glu	Ser	Thr	Asp	Ser	Arg	Arg	Lys	Ala	Glu	Pro	Ala	Cys
		115					120					125			
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Asp	Leu	Lys	Gln	Tyr	Trp	Met	Pro	Asp	Ser	Gln	Cys	Lys	Glu	Cys	Tyr
			165						170					175	
Asp	Cys	Ser	Glu	Lys	Phe	Thr	Thr	Phe	Arg	Arg	Arg	His	His	Cys	Arg
			180					185					190		
Leu	Cys	Gly	Gln	Ile	Phe	Cys	Ser	Arg	Cys	Cys	Asn	Gln	Glu	Ile	Pro
		195					200					205			
Gly	Lys	Phe	Met	Gly	Tyr	Thr	Gly	Asp	Leu	Arg	Ala	Cys	Thr	Tyr	Cys
	210					215					220				
Arg	Lys	Ile	Ala	Leu	Ser	Tyr	Ala	His	Ser	Thr	Asp	Ser	Asn	Ser	Ile
	225					230					235				240
Gly	Glu	Asp	Leu	Asn	Ala	Leu	Ser	Asp	Ser	Thr	Cys	Ser	Val	Ser	Ile
			245						250					255	
Leu	Asp	Pro	Ser	Glu	Pro	Arg	Thr	Pro	Val	Gly	Ser	Arg	Lys	Ala	Ser
		260						265					270		
Arg	Asn	Ile	Phe	Leu	Glu	Asp	Asp	Leu	Ala	Trp	Gln	Ser	Leu	Ile	His
		275					280					285			
Pro	Asp	Ser	Ser	Asn	Ser	Ala	Leu	Ser	Thr	Arg	Leu	Val	Ser	Val	Gln
	290					295					300				
Glu	Asp	Ala	Gly	Lys	Ser	Pro	Ala	Arg	Asn	Arg	Ser	Ala	Ser	Ile	Thr
	305					310					315				320
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